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BY

LORD BRASSEY

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PAPERS AND ADDRESSES

BY

Thomas Brassey

LORD BRASSEY, K.C.B., D.C.L.

MERCANTILE MARINE
AND
NAVIGATION

FROM 1871 TO 1894

ARRANGED AND EDITED BY

CAPTAIN S. EARDLEY-WILMOT, R.N.

LONDON
LONGMANS, GREEN, AND CO.
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1894

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EDITOR'S PREFACE

THIS VOLUME comprises a further selection of Lord Brassey's Papers and Addresses on Maritime Affairs from 1871 to the present time.

It deals specially with questions relating to the Mercantile Marine and to Navigation; subjects in which the author has always taken a lively interest, and in which, as regards navigation, he has had great practical experience.

This compilation usefully supplements the two volumes of Naval Papers already published.

S. E.-W.

November 1894.

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PART I

MERCANTILE MARINE

I

OUR MERCHANT NAVY

Lecture at Hastings, November 1873

It is to me a real relief to address you on maritime affairs. When speaking from this platform of the concerns of our ships and our sailors, I forget the controversies of political life—controversies of which I may frankly confess that, with increasing experience, I do not grow more heartily enamoured. It is far more agreeable to me to contend with an adverse breeze than to endeavour to overcome the scruples of the reluctant elector. I would say, with the poet:

How happy they
Who from the toil and tumult of their lives
Steal to look down where nought but ocean strives.

I commence my lecture by calling your attention to some figures which will illustrate the immense importance of our shipping as an element of the power and prosperity of our country, and which will equally serve to show our pre-eminence, as a maritime nation, over every other people in the world.

The gross total tonnage of the shipping entered and

Increase of shipping entered and cleared since 1838

cleared, with cargoes only, in the United Kingdom, in 1838, was 6,417,000 tons, of which British ships constituted 70·5 per cent. The gross total in 1871 was 35,502,000 tons, of which British shipping constituted 69·4 per cent. The aggregate tonnage of the merchant navy of the British Empire is 7,143,000 tons. The tonnage of the mercantile marine of the United States, registered for over-sea foreign trade, is 1,425,000 tons; that of France, 1,000,000 tons; that of Holland, 500,000 tons; that of Norway, 1,000,000 tons. The tonnage of the British Empire in 1815 was 2,681,000. The tonnage in 1854 was 5,115,000 tons; in 1862, 6,041,000; in 1864, 7,103,000. There has been no increase in the tonnage of late years, partly because the register has been cleared of the names of many ships which had been retained through previous want of care, and partly because steam has gradually superseded sail. The steam tonnage of the British Empire was, in 1838, 83,000 tons; in 1860, 500,000 tons; in 1869, 1,033,000 tons; and in 1871, 1,411,000 tons. The steam tonnage of the United States, registered for over-sea trade, is 181,000 tons; that of France, 143,000 tons. The tonnage built in the United Kingdom in 1864 was 433,000 tons; in 1867, 270,000 tons; in 1871, 354,000 tons. The number of seamen employed in 1867 was 196,000, with a percentage of 12·8 of foreign seamen. The number in 1871 was 200,000, with 9·76 per cent. of foreigners. The number of seamen employed to 100 tons in 1869 was, in sailing ships, 2·83; in steam vessels, 4·68. In 1871 the corresponding numbers were, in sailing vessels, 2·72; in steam vessels, 4·30.

Shipping of different nations

Increase of steam tonnage

Number of seamen employed

The principal trades of our mercantile marine

I pass on to give some account of the principal trades in which the British mercantile marine is engaged, and shall take the figures for 1871. If I place each foreign country in a series, commencing with that country with which our maritime intercourse is most active, they will come in the following order : First, the United States, then Russia, Germany, France, North American Provinces, Sweden, Spain, Norway, India, Holland, Belgium, and the West Indies. The value of the trade carried on with these countries does not vary in proportion to the amount of shipping employed. The most important branch of our foreign trade is carried on with the United States ; and the value of our imports from, and exports to, that country in 1871 attained the enormous total of 100,000,000*l*. Next in importance comes the trade with France, amounting to a total value of 62,000,000*l*. Then follows Germany, 57,000,000*l*.; India, 50,000,000*l*.; Russia, 22,000,000*l*.; North American Provinces, 18,000,000*l*. ; Sweden and Norway bring up the rear.

Steam replacing sail in traffic with United States

In the great trade with the United States, the sailing clippers of ten or fifteen years ago are gradually giving way to the magnificent fleets of steamers which have been established by the enterprising shipowners of Liverpool. To show how great a change has taken place in the class of ships engaged in the North American trade, I will take from the tables recently published by the Board of Trade the corresponding figures for 1854 and 1871. In 1854 the total tonnage of British and foreign ships entered with cargoes from the United States amounted to 926,504 tons. Of these, the tonnage of British sailing vessels was 275,000 tons ; that of steam vessels 89,000 tons. The tonnage of foreign sailing vessels amounted to 894,000 ; that of steam vessels was 33,000 tons. In 1871 the tonnage of British sailing vessels was 787,000 tons ; that of foreign sailing vessels 723,000 tons ; thus showing a slight decrease. Meanwhile the tonnage of British steam vessels had increased to 1,000,000 tons, showing an increase of 911,000 tons. The foreign steam vessels engaged in the trade with the United States had increased by 7 only in number, with an augmentation of 10,000 tons.

Increasing commerce with India

I will take another great branch of our foreign trade —that with British India—and again, comparing the years 1854 and 1871 together, we see a splendid development of commerce, and the employment of steam vessels increased in a much higher ratio than that of the sailing vessels, great as the increase in the number of the latter has actually been. In 1854 the total tonnage of British vessels entered with cargoes from the East Indies and Singapore was 329,000 tons, of which the sailing ships represented 319,000 tons. The total tonnage in 1871 was 829,000 tons—viz. 681,000 tons in sailing ships, and about 150,000 tons in steamers.

Influence of the Suez Canal on ocean traffic

The opening of the Suez Canal has produced a great change in the communications by sea with the East. When ships bound for the East Indies were compelled to circumnavigate Africa, the distance to be traversed without any intermediate coaling ports was such that the carrying capacity of the ships was scarcely sufficient to convey the coals consumed on the voyage. The transport of merchandise in addition was impracticable. The opening of the Canal has altered the conditions in favour of steamers, which not only have a much shorter distance to traverse, but can also obtain conveniently whatever supply of coal they may require at Gibraltar, Malta, Port Said, and Aden. In view of these advantages, an opinion was entertained that, after the opening of the Canal, it would be impossible for sailing vessels to compete successfully with steamers. An immense capital was accordingly invested in the construction of steamers adapted for the passage of the Suez Canal. Subsequent experience has not altogether verified the expectations of the shipowners. The tonnage-dues paid by vessels using the canal have been doubled; the cost of coals has been enormously increased, and the shippers have not found it worth while to pay a corresponding increase of rates in order to secure the advantages of the quicker transit by means of the Canal. In many descriptions of goods speedy conveyance offers no commercial advantages. For example, cotton can be sold on the market to arrive, as readily, and on as favourable terms, as if actually warehoused in Liverpool or London. Indeed, if all the cotton were to be brought home by steamer as soon as the crop is picked, the markets would be glutted, and prices unduly depreciated. On the other hand, if, in order to avoid this inconvenience, the cotton is warehoused in Bombay until the merchant judges that the happy moment has arrived to make an advantageous bargain, then an outlay must be incurred in the hiring of warehouse accommodation, and in the various incidental expenses. Hence it has been found more convenient, in many such cases, to employ sailing vessels. The greater duration of the voyage, in this case, is in itself an advantage, as the ship serves both as a conveyance and a warehouse for the cotton.

Advantage of sailing ships for cotton trade

Wheat in California

The recent enormous increase in the cultivation of corn in California has been equally conducive to the prosperity of the owners of sailing vessels. When I was in America last year, I read in the Californian newspapers fabulous accounts of the quantity of wheat grown in that State. The grain had accumulated to such an extent that the resources of the Pacific Railway Company were insufficient to deal with the traffic brought to the line; and the freights of sailing vessels from San Francisco to England were almost enough, in some cases, to pay for ships purchased a short time before at the extremely depreciated rates at that time prevailing.

Employment still for sailing ships

The better opinion would therefore seem to be that the days of sailing ships are not yet numbered, and that there is a prospect for many years to come of the continued use, for the purposes of maritime locomotion, of the motive power which is of all others the cheapest and most readily available. As a lover of sailing, I should be sorry indeed to contemplate the time when those splendid clippers which sweep across the ocean, and the less majestic but even more picturesque shipping which creeps along our coasts, shall have disappeared. There is something peculiarly fascinating in the sailors' art; in the constant and triumphant battle with the adverse gale; and in the infinite variety of life at sea, as contrary winds and more propitious breezes in turn succeed each other. In a sailing ship the seaman is constantly called upon to meet the sudden and unforeseen exigencies of the moment with some new and skilful manœuvre, or to repair or avert an accident by ready and ingenious seamanship. In a steamer, where the propulsion is derived from a power which never fails nor varies, with the development of which the officer on deck has no concern, there is not the same necessity for watchfulness or alacrity. There is less occasion and less opportunity for the display of the nerve and the professional skill of the experienced sailor. I need not insist, in dull and tiresome prose, on the æsthetic charms of ships propelled by canvas. Mr.

Superior training of a sailing ship

The poetry of sailing ships. Cowper

Ruskin has told us that, of all the curves known in nature or in art, none are so exquisitely graceful as those of the full sail swelling to the breeze. May we not, then, with the poet Cowper say :

Heaven speed the canvas, gallantly unfurled,
To furnish and accommodate the world ;
To give the poles the produce of the sun,
And knit the unsocial climates into one ?

Byron

And in this place I may appropriately remind you of that familiar quotation from Lord Byron, one of the most beautiful passages in a poem which, with all its faults, has many gems. You remember he exclaims in 'The Corsair'—

How glorious her gallant course she goes !
Her white wings flying—never from her foes :
She walks the waters like a thing of life,
And seems to dare the elements to strife.
Who would not brave the battle-fire—the wreck—
To move the monarch of her peopled deck ?

Scene at Hastings. Countless shipping passing

Few among the inhabitants of our coasts are favoured with more charming views of shipping than those which are from time to time witnessed from our own beach at Hastings. In fine weather, the wind drawing off the land, the sailing vessels passing up and down the Channel cling closely to the shore. At such a time the ships in view may be counted by many hundreds. Within a limit of fifteen miles from our coast a maritime commerce of almost incalculable value and extent is constantly maintained. Those ships you see on the horizon are coming and going to and from every quarter of the globe. You have before you not merely the shipping bound to London and our own ports on the east coast, but the vast commerce between the German and Baltic ports, and the Far East and America. My seafaring experience has taken me to the estuaries of the Thames, the Mersey and the Clyde, the Straits of Gibraltar, the St. Lawrence, and the approaches to New York; and in these waters the aggregation of shipping is at times immense. But the most travelled does not enjoy a better opportunity than the good people of Hastings of realising that marvellous development of human enterprise and ingenuity which has taken place upon the ocean.

Dangers of a sea life. Wreck Register for the United Kingdom

There is, alas! another side to this bright picture of national greatness and prosperity. The vast commerce of this country involves much danger to life. Upwards of 2,000 of our brave seamen perish every year; and though there is a certain danger in a sea life which no precautions can entirely remove, it is only too true that many lives have been sacrificed from the negligence, ignorance, and cupidity of certain shipowners, and from the want of proper care on the part of the officers and seamen themselves. I will take the Wreck Register for 1871, and give you an analysis of the melancholy story which it relates. I will ask your attention, in the first place, to the wrecks which occur on the coasts of the United Kingdom. The tables show the following as the annual average number of wrecks since 1852, divided into four periods of five years. In the first period, 1,045; in the second, 1,320; in the third, 1,611; in the fourth, 1,805, constituted the annual average number of wrecks. Of these casualties, in 1871, about one in twelve resulted in loss of life. The Marine Department of the Board of Trade express an opinion that the number of wrecks, casualties, and collisions may increase from year to year, owing to the increase in the number of ships frequenting our coasts and the narrow seas adjoining; whilst the particular number for any one year will be increased or diminished according to the prevalence or absence of gales of remarkable violence and duration.

Number of wrecks at different periods

In October, 1859, there was the 'Royal Charter' gale, and a loss of 343 ships. In January, February, and November, 1861, there were N.E. and S.E. gales, which added 340 to the number of wrecks. In January, October, and December, 1862, there were westerly gales, with upwards of 540 wrecks. In the first and the last three months of 1863 there were westerly gales, with 930 wrecks. Owing to the absence of any gales of especial violence and duration in 1864 the number of wrecks was 274 below the number in 1863. The gales of the six winter months of 1865 gave 766 wrecks; those of 1866, 793 wrecks. Of this number 279 occurred in January. On the 11th of the month 61 vessels in Torquay Bay alone were either totally lost or seriously damaged, and 35 seamen perished. The compilers of the Wreck Register proceed as follows: 'In 1867 the heavy gales experienced in the months of January, March, April, October, November, and December added 980 casualties to the list; and the whole number of wrecks reported in these months exceeded, by about 400, the number reported during the same months of the previous year. Nine hundred and two, or about three-sevenths, of the wrecks of 1867 occurred in January and December, and 251 occurred in March. With the exception of December, 1863, when 466 wrecks and casualties took place, the numbers for each of the three months stated above are far higher than for the corresponding months of the previous year. The most serious gale of the year 1867 was that which commenced on December 1, and continued until the 3rd. During the continuance of this gale 319 lives were lost, and 326 vessels were wrecked or damaged. Of these disasters 146 occurred on December 2. From the direction of the wind, which blew principally from the N. and N.N.E., this gale proved most disastrous to the vessels on the East coast, and to fishing-smacks on the Dogger Bank and other fishing grounds in the North Sea. In the year 1868 the most serious gales occurred on August 22 and 23, a month in which our coasts are seldom visited by heavy gales, and the number of wrecks and casualties reported during that month more than doubled the number recorded during the same month in any previous year.

Losses from other causes

It must not be supposed that gales are the only cause of the too numerous disasters at sea. Of the 328 losses from causes other than collisions, on or near the coasts of the United Kingdom in 1871, 137 happened during a strong gale, from stress of weather; 44 arose from defects in the ship or her equipments, and 99 were caused by inattention, carelessness, or neglect. Of the 826 casualties, 372 happened during a strong gale, 163 arose from carelessness, and 125 from defects in the ship or her equipments. During 1871, 155 wrecks or casualties happened to nearly new ships, and 302 to ships of from three to seven years of age; 361 to ships of from seven to fourteen years old, and 554 to ships from fifteen to thirty years old. Of the 1,927 vessels lost or damaged on the coasts of the United Kingdom in 1871, 223 were steamers, and 806 did not exceed 100 tons burthen. Only 155 were above 600 tons burthen. Of the 17,086 wrecks and casualties which occurred in the ten years from 1862 to 1871 inclusive, about one-half occurred in very fine weather.

It is impossible to detail these disasters without asking ourselves whether this number does not convey

Action of Mr. Plimsoll. His praiseworthy efforts

a grave reflection on the Government, the shipowners, and the seamen of this country. The case has been taken up with zeal and indomitable earnestness by Mr. Plimsoll, and though he may have been guilty of exaggerations, though ; in the intensity of his sympathy for the unfortunate sailors, he may have directed unjustifiable attacks on the Board of Trade and the shipowners ; though his remedies may not be calculated to effect the object in view ; yet it must be remembered, on the other hand, that the man who is capable of taking up a neglected cause with that degree of earnestness which is necessary to arouse the apathy of a great public, is rarely distinguished for the virtue of prudence and self-restraint. Peter the Hermit, if he had been a very prudent man, would not have persuaded our ancestors to make a crusade to the Holy Land ; and all must admit that Mr. Plimsoll has done a work which deserves the cordial acknowledgments of the country. Everybody who has been much at sea has witnessed innumerable illustrations of that recklessness and cupidity to which Mr. Plimsoll has succeeded in directing the public attention.

Many losses due to deck loading

The law, it seemed to him, should be amended, so that the overloading of a steamer to a dangerous extent should, *ipso facto*, vitiate the insurance. Mr. Fry, President of the Canadian Board of Trade, says that a close acquaintance with the North American trade for thirty-three years had convinced him that fully three-fourths of the losses of wood-laden ships in the Atlantic in the fall of the year are attributable to deck loads. An enactment passed by the Canadian Board of Trade, thirty-three years ago, prohibited all vessels, clearing at ports in British North America for ports in the United Kingdom, from carrying deck loads from December 1 to May 1 ; but unfortunately this law was repealed in

1862 by England in a Customs Consolidation Act. Mr. Fry proposes that the law should be revived by the Dominion Parliament. Seven vessels, laden with grain, were lost by overloading. A regulation is enforced at Montreal which requires all ships taking in cargoes of grain to be laden under the supervision of a Government official. But the penalty for infringement of this enactment is only forty dollars, and accordingly every one of the steamers that were lost paid the penalty, with the melancholy result which has been already stated.

Overloading

Unseaworthy ships

I have recently been much in contact with the Naval Reserve of the port of London, and I have repeatedly asked the seamen whether the practice of overloading commonly prevails. I have been assured that such unhappily is their experience. Overloading is not the only source of danger. Vessels are allowed to go to sea, in some branches of trade, until they fall to pieces. At Quebec, last autumn, I was surprised to find that the condition of the ships engaged in the timber trade was, in so many cases, most unsatisfactory. Almost every ship is now fitted with a windmill for pumping; and even in still water, when in their lightest trim, the pumps are generally discharging a continuous stream of water whenever there is wind enough to keep them in motion. How terribly leaky must such ships be when deeply laden, and labouring heavily in stormy weather at sea! Again, cargoes, both of timber and grain, are extremely dangerous unless due precautions are taken to prevent them from shifting. Now bulkheads and other necessary precautions for that object, and careful stowage, are all sources of expense, and the parsimonious and reckless will ever persist in neglecting every means of securing safety unless they are compelled by law to adopt them. The principal source of danger is, as has

Inefficient equipment

Danger of excessive facility for insuring

already been pointed out, the excessive facility for insuring against every kind of maritime risk. It were much to be desired that some means should be found of determining for every ship the maximum value, beyond which the owners should not be permitted to insure. While the objections to excessive insurance well deserve consideration, it is most difficult to discover any means by which the practice can be checked by legal enactment. It is quite clear, as a matter of principle, that every owner should stand to lose, and not to gain, by the loss of his vessel, and any system of insurance is faulty under which it is worth nobody's while to inquire into the character of the ships insured, or the circumstances which led to their loss.

Incapacity of masters and seamen Insufficient penalty

In considering the various causes of loss at sea, we must not omit to notice the carelessness and incapacity of masters, and sometimes of seamen. For offences of this character the law has not been sufficiently severe. The suspension of certificate for twelve months is the maximum penalty known to law for cases which, in an engine-driver on a railway, would have been pronounced to be manslaughter. The investigation which is now being conducted by a Royal Commission cannot be otherwise than acceptable to the owners of good ships, who suffer from the competition with worn-out vessels, bought at the lowest prices, and sailed at small expense, because so miserably found. The freight which owners of these vile ships are content to take cannot be remunerative to those who conduct a legitimate business. Again, the owners of sound ships suffer injustice because they are compelled to pay higher rates of insurance, in order to compensate the underwriters for the losses they sustain from more hazardous risks.

It must not be supposed that nothing has been done

Improvement in food and accommodation of seamen

for the protection of the sailor. 'Already his food,' says a well-informed writer in the 'Nautical Magazine,' 'is the subject of statutory enactment, as also his sleeping accommodation, lime and lemon juice, the medicine, conduct afloat, the boats, the anchors, and cables.' By a recent Act it has been made a misdemeanour for a shipowner to send an unseaworthy ship to sea. Sailors can leave their ship if they believe her to be unseaworthy, and complain before leaving her; and they can call in a surveyor of the Board of Trade to survey the ship. By the Act of last session the master of a ship about to sail is bound to furnish particulars of the draught of water of his ship to the appointed officer of the Board of Trade. Restrictions have been placed on the re-registration of ships until they have been certified to be seaworthy. Compensation is now payable to a seaman detained on a charge of desertion, if it shall be found on survey that his ship is not seaworthy. When the Board of Trade have received a complaint that a ship is unseaworthy they may make a survey. If it be found that the ship is not seaworthy, the expenses of the survey are to be paid by the shipowners. If the ship is found to be in good order, the Board of Trade is liable to pay compensation for the detention of the ship, and these expenses are recoverable from the complainant. In case of collision, the master of each vessel is bound to stay by the other. If he fails to do so, he is punishable for a misdemeanour.

Survey by Board of Trade on unseaworthy ships

Work of the Royal Commission

The Royal Commission now sitting is engaged in the endeavour to discover what further securities it is possible to provide. Their report, which has lately been published, is not intended to set forth their final conclusions; and, as one of the Royal Commissioners, I have been disappointed to observe in many journals a disposition to treat that which was never intended to be more than a mere analysis of evidence as a final statement of our conclusion. We have endeavoured to place before the public the general bearing of the evidence which we have received. We show how great are the difficulties in the way if some of Mr. Plimsoll's proposals be adopted. It does not follow that nothing effectual can be done. There are measures which would tend to give additional security to the sailors. But if we give greater power to the Board of Trade, and appoint on the staff of the office competent lawyers, and additional surveyors of experience and high professional standing, there must be increased expenditure, and for that inevitable consequence the British taxpayer—that most patient and lavish individual—must be prepared.

Complaints of our seamen unfounded

The condition of our seamen has been the subject of much complaint. It has been urged that their numbers are not sufficient, and that they have deteriorated in skill, character, and discipline. It is said that the change is due to the abolition of compulsory apprenticeship. I am not satisfied that these complaints are altogether well founded.

Smaller crews and quicker passages

The sailor of former days was proverbial for recklessness; and as far as the efficiency of the crews may be tested by results, it is a fact that the number of seamen employed, in proportion to the tonnage, has diminished, and that ships now perform their voyages in a much shorter period than in the days when apprenticeship was universal. I have been informed that the average duration of a voyage to Australia by sailing ships is now little more than half the average of forty years ago. Some share in this improvement may fairly be claimed for the seamen, though doubtless the gain is principally due to the progress of naval architecture, to the addition since made to our knowledge of meteorology, and to the improved skill of the officer in the art of navigation.

Privations of seamen. Moral and social conditions

The subject of the Mercantile Marine of England should not be dismissed without a few words as to the moral and social condition of our sailors. Let us endeavour to realise in how great a degree the seaman's life is passed in solitude and privation. Under the most favourable conditions the seaman, from the necessity of his calling, is deprived of many pleasures and advantages which those who live on shore can enjoy without restraint. He well deserves the sympathising interest of those whose lot is more favoured than his own. For him there is no genial fireside where he may take his evening's rest at the close of a day of toil. The loving welcome of wife and children must often seem a remote and uncertain prospect to husbands and fathers far away from home upon the distant seas. And yet the sailor may find his consolations in the thought of those he loves and in the hopes of happy meetings. M. Bersier, one of the most eloquent among the many great preachers whom the French Protestant Church has produced, has developed this thought in a touching passage. 'There are,' he says, 'two kinds of solitude—the visible and the inwardly felt solitude. When we are neither seen, touched, nor heard by anyone, we say that we are alone; and yet we are not always, at such a time, in a true sense, solitary. The fisherman, who must pass his nights on the mighty ocean, does not feel himself alone. If he hears no other sound than the monotonous moaning of the sea and wind—if no human voice reaches his ear—he thinks of his family sheltered in comfort, of his children peacefully slumbering. It is for them he toils; for them his heart is full of love; and thus he does not feel himself alone.'

Solitude of a seafaring life

The sailors whom I have employed now for many years have all come from the same village, Rowedge, on the river Colne. I cannot speak in terms too favourable of their conduct in a moral point of view, and of their skill as seamen. The arrival of a budget of letters is the great pleasure of their lives when absent from home. Every man among them has a wife or a mother, or one whom he loves and hopes to marry. Each has some dear one to care for, whom he delights to think he is making happy by his honest toil. On a fine night at sea, in the tranquillity of the middle watch, the conversations before the mast are all of home life, home pleasures, home anxieties. Many among us who live on shore unfriendly and unsympathetic lives are more truly isolated than these warm-hearted sailors.

Pleasure of news from home

Amidst the crowd, the hum, the shock of men,
To hear, to see, to feel, and to possess,
And roam along, the world's tired denizens,
With none who bless us, none whom we can bless;
Minions of splendour, shrinking from distress!
None that with kindred consciousness endued,
If we were not would seem to smile the less:
Of all that flattered, followed, sought and sued.
This is to be alone; this, this is solitude!

Again, the sailor is cut off from those spiritual privileges which cannot be extended to him when at sea. For him no church bells ring on Sunday morning; and although, in a well regulated ship, the services are duly held, in too many cases the seaman is entirely cut off from religious influences. The sailor's life should not be devoid of religious impressions. In constant conflict with the greatest force of nature, man feels his own littleness, and the omnipotence of the Creator. 'They that go down to the sea in ships, that do business in

Absence of spiritual ministrations

great waters, these men see the wonder of the Lord, and the marvels in the deep.'

I must now draw to a conclusion. If, in the hour which you have devoted to the study of the condition of our merchant navy, you have gathered some valuable information ; if, above all, you have learned to feel a more earnest sympathy for our sailors, I shall have been abundantly rewarded. I have endeavoured to bring before you some of those deep thoughts and meditations which a sea life should inspire in a susceptible nature. And I can find no more appropriate peroration to an address on such a subject than those magnificent stanzas in which, the story of his pilgrimage ended, Childe Harold is brought at last to the borders of the Great Deep :

There is a pleasure in the pathless woods,
  There is a rapture on the lonely shore,
There is society, where none intrudes,
  By the deep sea, and music in its roar.

. . . .

Thou glorious mirror, where the Almighty's form
  Glasses itself in tempests ; in all time,
Calm or convulsed—in breeze, or gale, or storm,
  Icing the pole, or in the torrid clime
Dark heaving ;—boundless, endless, and sublime.
  The image of Eternity—the throne
  Of the Invisible : even from out thy slime
The monsters of the deep are made ; each zone
  Obeys thee ; thou goest forth, dread, fathomless,
    alone !

II

OUR SEAMEN

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FOR many generations English statesmen have been engaged in the attempt to alleviate the grievances and wrongs of the people. Such is the frailty of human nature, that a field will always be open for similar philanthropic labours, though its limits have been considerably narrowed by the successful efforts of the past—efforts which an honourable rivalry has made the more vigorous and persistent. Hence it is that, in our age of advanced civilisation, it can seldom fall to the lot of an individual to find the opportunity of evoking the sympathies of the public in a good cause which has never been taken up before. Such, however, is the distinguished position of Mr. Plimsoll.

Mr. Plimsoll

True it is that, when all that it is practicable to do has been done the sailor must still remain subjected to hardship, exposure, and danger. These, indeed, are inevitable conditions for which there are compensations to men of an adventurous spirit in the various incidents of a life at sea. But until Mr. Plimsoll stood forth to assert the claims of 'Our seamen' to the protecting care of the State, they were exposed to many needless perils and privations.

Case overstated

It is to be regretted that a strong case has been somewhat overstated. Mr. Plimsoll has been too eager to level his lance at all comers ; too prone to listen to the inventions of idle tale-bearers; too prejudiced against the shipowners ; too reluctant to acknowledge the honest intentions of the Board of Trade, and to recognise the wise direction in which it has been their endeavour to guide the course of legislation. In short, his judgment has been overpowered by his absorbing interest in a noble cause.

His zeal and enthusiasm

On the other hand, it will be generally allowed that, by his successful appeal to popular sympathy on behalf of the British seaman, Mr. Plimsoll has well earned the acknowledgments he has received. His assertions may have been too sensational, and not always accurate. A perfectly temperate and carefully measured statement would not have produced the great effect which has been wrought by the passionate harangues of the member for Derby. In olden days men were first moved to undertake the crusades by the exhortations of an enthusiast, who had never cared to examine the dangers before taking upon himself the responsibility of inviting the chivalry of Christendom to the task of recovering Jerusalem from the Saracens. Enthusiasm made Peter the Hermit insensible to difficulties ; and enthusiasm makes the modern champion of our seamen incapable of appreciating the honest purpose of those who are bound by their convictions to stand forward in opposition to the adoption of his proposals.

What can be done to remedy the evil

It must not be supposed that, because his own suggestions are impracticable, there is no remedy for the evils so effectively exposed by Mr. Plimsoll. It is the duty of the executive Government, of the committees of Lloyd's, the Liverpool Registry of Iron Ships, and other insurance societies—it is, above all, the duty of that vast majority of our shipowners who do their business honestly, and, by their successful enterprise, confer so much distinction on their country, to make use of the opportunity afforded by the state of public opinion on this question. The practice of sending overladen and unseaworthy ships to sea is wrong both in a moral and mercantile point of view. Something may be done by stricter laws, and Parliament is eager to enact them. More may be accomplished by an improvement of the habits and customs of trade.

Board of Trade given greater powers

Meanwhile, Mr. Plimsoll may justly congratulate himself on the results already achieved by his persistent efforts. He has caused the Board of Trade to be armed with powers which, without external aid, they could not have obtained. The Department is in truth in a difficult position, standing as it does midway between the contending forces of the shipowning interest on the one side, and the humanitarian agitation on the other. The excellent judgment, rare knowledge of the varied business of his office, and devoted zeal of Mr. Farrer, will be fully recognised by all who have in any capacity been brought into communication with him. The British public is eminently just, and cannot but appreciate his services highly. It would be unfair to the Board to doubt their sincere desire to afford all the legal protection to the seamen which the circumstances of the case permit, and they have not been slow to avail themselves of the sympathies aroused by the energy and zeal of Mr. Plimsoll. Relying upon the support thus opportunely afforded to them, they have introduced manifold improvements in the law, and made some progress in strengthening their staff of nautical advisers and surveyors.

Mr. Farrer

The system of inquiry into the causes of maritime

Inquiries into maritime disasters

disasters, than which nothing can be conceived more calculated to promote the security of life at sea, has been developed considerably during the last three years. Prior to 1872 the average number of such inquiries, held under the direction of the Board of Trade, was thirty-seven a year. The number was increased to fifty in 1872, and to 193 (of which, however, thirty-four were abandoned) in 1873.

Changes in the shipping laws

The Department, meanwhile, has not neglected other equally important remedial measures. Powers have been gradually obtained from Parliament, which will materially increase the authority of the Government whenever it is necessary to interfere, to protect the seaman from the danger caused by want of caution, by inexperience, or by the culpable recklessness of shipowners. Under the auspices of Lord Carlingford, who was greatly assisted by the diligent inquiry, and by the preparation of measures, conducted under the direction of Mr. Shaw Lefevre, several important changes in the law were effected. According to the provisions of the Merchant Shipping Act of 1854, as expounded by the Law Officers of the Crown in an opinion given in 1855, owners were bound to keep their ships in seaworthy condition, and seamen had a right to complain if they believed that the ship for which they were engaged was unsafe. As, however, the burden of proof lay upon the seamen, and they were not allowed to give evidence themselves, it was practically impossible for them to prove their case.

Merchant Shipping Amendment Act of 1871

To meet this legal difficulty the law was amended in a sense highly favourable to the seaman by the Merchant Shipping Amendment Act of 1871. Under that Act the Board of Trade obtained power to hold an inquiry as to the condition of any merchant ship, upon receiving a complaint from a quarter of the crew, they being not less than five in number. The Board further obtained power to detain any ship suspected of being unseaworthy; but overloading was not expressly specified as a cause of unseaworthiness. Lastly, the magistrates were directed to receive evidence volunteered by the seamen with whom the complaint had originated. In 1873, a further Act was passed, in which overloading was separately defined to be a cause of unseaworthiness.

Board of Trade may detain unseaworthy vessels

Furnished with the great powers conferred upon them under the recent Acts, the authorities of the Board of Trade may interfere whenever they have reason to believe that it is the intention of a shipowner to send an unseaworthy ship to sea. That they are duly sensible of their increased responsibility is manifest from the course of action they have thought it their duty to pursue. Within the space of a few months after the passing of the Act of 1873, 245 ships, suspected of being unseaworthy, were detained and surveyed by the Government surveyors. Of these 190 were condemned for unseaworthiness, and eighteen for being overladen.

Present powers of Government sufficient

The power of detaining ships, and compelling the owners to execute necessary repairs, or reduce excessive cargoes, is indeed amply sufficient to accomplish all that it is possible for the Government to do in the management of the mercantile marine of the British Empire. The weak point of our administration will be found, not so much in the want of the necessary powers for the repression of malpractices on the part of unscrupulous shipowners, as in the insufficiency, not the inefficiency, of the *personnel* of the Marine Department of the Board of Trade, and in the want of a legal adviser. The law is strong enough. It has been suffered, in too many cases, to remain a dead letter, because there has been no law

Increased staff of Marine Department required officer to perform the duties of a public prosecutor. The Board of Trade have hitherto been dependent for the management of legal proceedings on the solicitors acting for the Home Office or the Treasury. The pressure of the business more immediately belonging to their own Departments has caused delays, sometimes extending to months, in prosecuting the cases referred to them from another office. In the interval the essential witnesses, the shipmasters or the seamen, have gone to sea in other vessels, and prosecutions which ought to have been instituted have been abandoned.

More professional advisers to Board of Trade necessary

While the Board of Trade has no proper legal staff, the Marine Department is not at present so constituted as to exercise the needful authority, or to command the confidence it is so desirable to inspire both in shipowners and seamen. The Secretary of the Marine Department of the Board of Trade has no personal experience of nautical affairs. In the discharge of his multifarious duties, in many of which the knowledge of a sailor is required at every turn, he has one professional adviser only. While the energy, experience, and capacity of Captain Murray, whose services the Board of Trade had been fortunate enough to secure, are universally acknowledged, it is quite impossible for a single individual to get through all the work assigned to him under existing arrangements. It is his duty to report upon nautical inventions; to advise as to the working of the Chain Cables and Anchors Acts; to consider the many suggestions, continually brought forward both in England and abroad, for modifications in the rule of the road at sea; to inspect periodically the life-saving apparatus supplied by the Board of Trade to every Coastguard division; and to visit the ports where the Board have reason to believe that the practice of overloading, or the

Duties of Captain Murray

unseaworthy condition or faulty construction of the ships, call for special activity on the part of their surveyors. Besides these and other similar important duties, involving the necessity for frequent journeys and absences from London, the examination of the reports of the receivers of wrecks upon the circumstances which have led to maritime disasters within their districts, is in itself a sufficiently onerous task to occupy a special officer. It has been the practice carefully to consider these reports before arriving at a final conclusion as to the expediency of a further inquiry or prosecution. In forming such a decision the circumstances to be taken into view cannot be duly appreciated without the aid of nautical advisers. The non-professional officers of the Board of Trade depend at present chiefly on Captain Murray, who may be absent from London in the discharge of his other duties at the moment when his advice is needed. It has been already pointed out that delay is particularly to be avoided when the testimony of seafaring men is necessary. A sea officer of experience should be attached to the Board of Trade, to attend exclusively to the examination of reports relating to wrecks and collisions.

Representatives of the Board of Trade at the principal seaports

The measures recently passed by Parliament, and those still in contemplation, give additional responsibility to the local officers of the Board of Trade. It is now more than ever necessary that at the great seaports the Board should have for its principal representative an individual of high position and wide experience, superior to personal influence of every kind, and charged specially with the duty of doing equal justice as between the sailor and shipowner. The presence of such an officer would have more effect in checking the practice of overloading, and in preventing unseaworthy ships from being sent to sea, than minute regulations, carefully framed at the central office of the Board of Trade, but enforced at the ports by officials having no personal claims to exercise authority over the mercantile community. The Board should not be deterred from giving adequate salaries for these superior appointments by the groundless apprehension that Parliament or the country would view with dissatisfaction an augmentation of the public charge if required for such a purpose.

Official inquiries into losses at sea, defects of

The mode of conducting official inquiries into the cause of losses at sea was severely criticised by the most experienced witnesses who gave evidence before the Royal Commission on Unseaworthy Ships. Founding their remarks on this subject upon the general tenor of the information obtained from the officers of the Board of Trade and the solicitors of the Customs, the Commissioners have pointed out in their Report that 'the present mode of conducting these inquiries assumes the shape of a criminal proceeding against the captain, rather than a careful investigation into the cause of the disaster. The chief point at issue seems to be whether the captain is to be acquitted or punished; and, inasmuch as he is on his trial, he may, if he pleases, volunteer a statement, but cannot be examined. The Court, again, has no power over the shipowner; he may be culpable, but he is altogether beyond the jurisdiction of the Court.' The Commissioners have accordingly recommended that 'the preliminary inquiry by the Receiver of Wrecks should be limited to such a narrative statement as would enable the Board of Trade, with the aid of their legal adviser, to decide upon the propriety of an official inquiry.'

If such an inquiry is deemed advisable, with the view of ascertaining the cause of the disaster, and

Inquiry should deal only with cause of casualty

thereby guarding against future casualties, they have recommended that 'there should be a complete severance between this inquiry and any proceedings of a penal character. It should be a mere inquest into the cause of a loss or casualty. The result should be reported to the Board of Trade, and the Board should have power to proceed criminally against the master, mate, or other member of the crew, whose neglect of duty may have occasioned the disaster.'

Liability of shipowner

Under the 11th section of the Merchant Shipping Act, 1871, it was declared to be a misdemeanour in a shipowner to send his ship to sea in an unseaworthy condition. The Commissioners thought that the master, like the shipowner, should be made amenable to the criminal law, if guilty of a similar offence, by leaving port in command of a ship which he knows to be unseaworthy.

Reluctance of masters and seamen to refuse service in an unseaworthy vessel

Mr. Plimsoll has described with dramatic power the reluctance of shipmasters and seamen to face the charge of cowardice, which they fear may be brought against them if they honestly admit that they are afraid of going to sea in an unseaworthy vessel; and he has insisted, not without justification, doubtless, in many cases, on the pressure owners can bring to bear upon shipmasters, by threatening to employ other persons if there be any hesitation as to going to sea. The suggestion of the Royal Commission will have the effect of protecting shipmasters in a dependent position. Neither officers nor seamen should be compelled to undertake a voyage which not only involved them in personal danger, but exposed them to the risk of imprisonment, perhaps for a long term of years.

In all the debates that have taken place on the losses of British shipping the blame for disasters has

Masters and seamen should share responsibility with owners for losses

been laid upon the shipowners. Public opinion on this subject is not just. The masters and the seamen are responsible for many disasters laid to the charge of their employers, who have been heavy losers by the carelessness of their servants. Whenever an accident occurs upon a railway, the whole machinery of the law is set in motion to punish the responsible persons. The public who, from constant travel, can appreciate the facts of the case, are, from motives of self-interest, resolved to do all that can be done to promote the security of railway travellers, by the terrors of criminal punishment, and by the imposition of heavy damages on the companies. Much has been accomplished by making use, in the most stringent manner, of the remedies provided by the common law. The same legal means exist for the punishment of similar offences at sea ; and yet, while the drivers of locomotive engines 'have been found guilty of manslaughter where it has been shown that by their carelessness they have caused the occurrence of a fatal accident, there is scarcely a single instance of a prosecution of a master, a mate, or a man on the look-out, or at the helm of a vessel,' although the cases have undoubtedly been numerous in which vessels have been lost by the negligence of the master or crew. The Commissioners were of opinion that 'enactments relating to the punishment of the master or crew, whose negligence has occasioned loss of life or property, should be framed, of a more definite and stringent character than those now in existence.'

Suggestions to the Royal Commission by Messrs. Farrer, O'Dowd, and Hamel

As to the constitution of the Court of Inquiry, valuable suggestions were offered to the Royal Commission by Mr. Farrer, Mr. O'Dowd, and Mr. Hamel. The opinion of the latter gentleman, from his long experience of twenty-eight years in the capacity of Solicitor to the Board of Customs, will be likely to carry especial

Objections to existing courts of inquiry

weight. He pointed out grave objections to the courts as at present established. The stipendiary magistrates in the great ports, such as Liverpool or Hull, are lawyers of high standing and unquestionable independence; but their time is already so fully occupied in the daily business of their courts, which must be first disposed of every morning before a nautical inquiry can be taken, that there is often considerable delay in the hearing of such cases. There are objections of a still more serious nature to a court composed of the borough magistrates of a seaport. They may be, as at Glasgow, in the case cited in his evidence by Mr. Burns, tradesmen of the town, who, however respectable and capable of dealing with the usual police cases, are without the peculiar experience which is necessary to enable them to give a judgment upon an intricate nautical question. They may be, on the other hand, shipowners with considerable knowledge of maritime affairs; but their interests may be so closely involved, that they are unable to pronounce an impartial verdict. It was, therefore, proposed by Mr. Hamel, and his views are in close accord with those of Mr. O'Dowd, that the coasts of Great Britain should be divided into three districts, and that a barrister should be appointed to each for the purpose of holding all the inquiries ordered by the Board of Trade. It was advised that two nautical assessors should be appointed for every court of inquiry, one to be acquainted with navigation and seamanship, and the other with shipbuilding. The cost of holding the 195 inquiries of 1873 was not less than 15,000*l.*; and Mr. Hamel expressed a firm conviction that with that expenditure he should be able to defray the costs and charges which would be imposed upon the Treasury by the adoption of his scheme in its entirety.

Proposals of Mr. Hamel

Survey and marking of ships

The opinion of the Royal Commission, as it is now well known, was distinctly adverse to the principles of Mr. Plimsoll's Bill 'for the periodical survey of merchant ships, and for so marking ships as to diminish the practice of overloading.' The Commissioners have even thought it their duty to characterise the powers already entrusted to the Government under recent enactments as stringent and arbitrary. Their view has been that, as regards the survey of merchant ships, the main point for consideration is the more perfect organisation of the Marine Department of the Board of Trade.

Evidence of Mr. Farrer and Mr. Gray

In giving evidence before the Commission, Mr. Farrer and Mr. Gray have been equally reluctant to accept any additional duties, powers, or responsibilities. They have insisted on the practical difficulties of determining the exact depth to which a vessel may be safely loaded, and on the impossibility of obtaining a sufficient staff of surveyors competent to undertake the task of keeping the entire mercantile marine under constant and thorough inspection. They have not attempted to conceal the fact that they have sometimes been misled, and that they are apprehensive that the same mistakes may be made in the future.

A court of appeal

To meet the contingency of a complaint being brought by a shipowner against the adverse decision of a surveyor, it has been suggested by Sir James Hope, with the concurrence of his colleagues on the Commission, that a prompt and efficient court of appeal might be constituted by giving the principal officer of Customs in the port the power of summoning three experienced shipmasters, who should be empowered summarily to determine whether an appeal by the owner or master of a ship, condemned as unseaworthy, is or is not well founded.

Difficulty of fixing a uniform rule for loading

The difficulty of fixing a uniform rule for the loading of merchant ships is insuperable. The rule that there should be three inches of clear side to every foot immersed has been adopted for the long voyage trades by the most experienced shipowners. If every ship for which legislation was required were uniform in type, and employed in the same trade, no objection could be urged to a law compelling the loading of ships to be in all cases limited in accordance with a general and salutary usage of trade. The mercantile marine is composed of ships of an infinite diversity of types, employed in the most varied branches of commerce; and overloading must, therefore, be regarded as a relative question. The nature of the voyage, the season of the year, the description of cargo, the stowage, the mode of construction of the ship—all these points must be taken into account in determining to what depth a vessel may be safely loaded. For the particular trade in which they are engaged, there can be no reasonable objection to the limited freeboard and peculiar stowage of the cargo observable in a Thames hay barge. These vessels creep along the coast to Maldon, and other parts of Essex, at some distance from the mouth of the Thames; and it is difficult to draw an exact line of demarcation between a mere river voyage, where the rules of freeboard would not apply, and a coasting voyage, where they should be insisted upon. In the summer months it is no uncommon sight to see half a dozen barges from the Thames at anchor in the port of Portsmouth. When fully laden, their decks are almost level with the water. Their safety depends on the mode in which the hatches are secured, and even more on the judgment exercised by their crews in the selection of favourable weather for the prosecution of the voyage, and on their prudence in running for a harbour upon the first indication of an approaching storm.

By special arrangements in the construction of a ship, a much deeper immersion may be made consistent with safety than that allowed under Mr. Plimsoll's Bill, which requires for a ship not being spar-decked, that there should be a spare buoyancy equal to one-fourth part of the displacement, and for a spar-decked ship, that there should be a surplus buoyancy of one-eighth part of the displacement, reckoning in each case from the main deck downwards.

Support of Mr. Plimsoll by Mr. Reed

Among the experts who have supported the remedial legislation proposed by Mr. Plimsoll, Mr. Reed is perhaps the most distinguished; and he would, of course, decline to allow any such rule to be applied to vessels of his own design, constructed, like the 'Devastation,' with a special view to combine complete safety with exceptionally low freeboard. But, as in the construction of the 'Devastation,' so in the deck fittings of steam colliers. These vessels may be safe, even when deeply laden, and driven against heavy head seas, which completely sweep the decks. The coamings are of iron. The hatches are of the same material, and secured in such a manner by iron bars and screws that it is impossible for water to break through the hatchways into the holds. How is it possible to apply rules of freeboard, laid down for modern sailing ships, navigating from England round the Horn or the Cape, to coasting steamers of the special construction here described?

It would be tedious to multiply illustrations of the difficulty of applying fixed rules for determining the load line of merchant ships. The owners of small vessels in the coasting trades unanimously declare that they would be deprived of their scanty livelihood if compelled to sail under the rules proposed by Mr. Plimsoll.

Danger of underloading ships in ballast

It should not be forgotten, in considering the subject of overloading, that there is serious danger in underloading. When vessels are despatched from port to port seeking a cargo, there is a temptation to limit the amount of ballast to the smallest quantity possible. Yet a vessel in ballast, if too light, is in danger of being capsized in a squall; or, if caught in bad weather on a lee shore, she cannot ply to windward. Cases have even been known of colliers in ballast being driven by an off-shore gale from the English coast, and wrecked on the coast of Denmark.

Prevalence of overloading in some English ports

These objections to any regulations as to load line are urged with the greatest regret, because it must be acknowledged that the malpractice of overloading prevails to a lamentable extent in some English ports. No vessels are so frequently overladen as our own; and it is probable that in this circumstance, taken together with the carelessness which leads to so many collisions, the explanation will be found for the fact that the percentage of casualties at sea is probably greater in the British mercantile marine than in any other.

Prohibition of deck loading

The prohibition of deck loads at certain seasons has been insisted upon by Mr. Plimsoll. A distinction should be drawn between a deck load of timber and the stowage of carriages and agricultural machinery on deck. It is at all times undesirable, and in the stormy season extremely perilous, to carry timber on deck across the North Atlantic. It is not equally necessary to prohibit deck cargoes of deals on vessels trading between the Baltic and England.

It has been said that the Norwegians buy our worn-

Disposal of old vessels. Few bought in Norway

out vessels, and that the otherwise mysterious circumstance that a ship is so rarely broken up in our own ports, because no longer fit for sea service, may thus be explained. From inquiry in Norway, I am satisfied that comparatively few English-built ships are transferred to the Norwegian flag, and that any old vessels purchased from us are employed in the timber trade from the southern ports of Norway. In the export trade in salt fish and oil from Bergen, Aalesund, Christiansund, Tromso, and Hammerfest, to Spain, the West Indies, and Brazil, conducted with equal activity both in winter and summer, where the voyages are long, and the cargoes perishable, the vessels, although small in tonnage, are excellent in quality. There is no supervision over the Norwegian merchant shipping by Government surveyors. The nautical experience and mercantile instinct of the shipowners have established a proper distinction between the different trades, and led owners to provide suitable vessels for each. One would hope that equal confidence might be reposed in the discretion of British shipowners. It must be acknowledged, not without humiliation, that with us commercial rivalry is so keen that unjustifiable risks might be run, unless the desire to reduce expenses to the lowest limit were controlled by the power, now conferred upon the Government, of detaining a ship in port.

Norwegian practice

Canadian law as to deck cargoes

The subject of deck cargoes in the North Atlantic timber trade has been vigorously attacked by the Parliament of the Canadian Dominion. They have revived the law first enacted by the British Parliament. Deck cargoes of timber on ships crossing the Atlantic between October 1 and March 16 are now prohibited. An exception in favour of deals has been reluctantly conceded to the representatives of the ports of New Brunswick. The Royal Commission has recommended 'a similar enactment by the British Parliament, as being calculated to give the sanction of the mother country to the views of the Canadian Legislature, and as an inducement to other timber-exporting countries to consider favourably the propriety of similar legislation.' The rules of several mutual insurance clubs, managed by committees of thoroughly practical men, many of whom have been masters of vessels, prohibit such cargoes during the winter months. The effect of such a restriction on the price of timber to the consumer would be inappreciable. It may be confidently assumed that, while much danger to life would be avoided, the trade would not be injuriously affected by the proposed law.

Action of British Parliament. The carriage of timber on deck prohibited

Whenever the attention of Parliament has been directed to the prevention of losses at sea, the prohibition of deck cargoes of timber has been recommended. Such was the conclusion of the Committee of 1839. At their suggestion, an Act was passed in 1840, prohibiting the carrying of timber on deck between September 1 and May 1. The Committee of 1843 expressed the same views, and declared that no ship could be seaworthy when her upper deck was lumbered with a large cargo. A law, proposed by one Committee of Parliament, sanctioned by another, and highly approved by shipowners possessing the wide experience of Mr. Rankin, would have been allowed to remain in force, unless some changes had taken place in the conditions under which the trade was conducted. Such a change occurred when, in 1850, the Navigation Laws were repealed, and when, in 1860, the differential duties on foreign timber were abolished.

These alterations were in strict accordance with the

Evasions of the law

principles of free trade ; but they led to many abuses. To avoid the payment of proportionate tonnage dues, timber was carried in lengthened poops and under spar decks, thereby imposing a great strain upon the ships, and entailing considerable danger to the seamen. The deck law was further evaded by sending ships across the river St. Croix, which divides New Brunswick from the United States, in order that a deck cargo might be taken on board, and a final clearance obtained from a port in Maine. The difficulty of enforcing a law so easily evaded induced the Board of Trade to introduce a clause for its repeal into the Customs Act of 1862. The clause escaped the observation of shipowners in this country, and it received the sanction of Parliament.

Its repeal in 1862

Further action of Board of Trade

It must not be supposed that the Board of Trade have viewed with indifference the practice of carrying cargoes on deck. Though they deemed it expedient to repeal a law which it was impracticable to enforce, they have endeavoured in other ways to discourage deck cargoes. The Merchant Shipping Code, brought in by Mr. Shaw Lefevre in 1869, and only laid aside owing to the pressure of more urgent political controversies, contained a provision for imposing tonnage dues on deck cargoes.

Carriage of machinery on deck

The stowage of agricultural machinery and carriages on deck would equally fall within the prohibition of Mr. Plimsoll's Bill ; and here the restriction would be productive of serious injury to trade. If it were necessary that threshing machines should be taken to pieces in order to be despatched from Hull to Hamburg, our manufacturers would no longer be able to compete with foreign makers for the supply of implements to the German farmers. It would indeed be far better that we should lose our trade than that the lives of our seamen should be imperilled ; but there is no necessity for absolutely prohibiting steamers from carrying machinery on deck. Free circulation on deck is not so necessary on a steamer, where the sails are only auxiliary to the steam-power, as it is in a full-rigged sailing ship. Even in a steamer, however, it is dangerous to encumber the decks too much. It is a question of degree. Where four threshing-machines may be safely carried, it might be dangerous to carry twelve. The proper limit must be considered, in the first instance, by the shipowner, upon his undivided responsibility. If he fails to do his duty, the Government has now the power to step in, to compel him to restrict the loading of his vessel ; and he may be punished, as for a misdemeanour, for obvious imprudence.

Special licences

Mr. Plimsoll proposes that there should be special licences from the Board of Trade, authorising the carrying on the deck of the licensed ship of any specified goods or any particular class of goods. There is a merely nominal distinction between the system of special licences and the power of detaining any vessel in port if laden beyond the amount which, if licences were required, she would be authorised to carry. In either case the Board of Trade may effectually prohibit the practice of overloading.

Difficulty of framing regulations for overloading

In closing this branch of the subject, I cannot but express once more a sincere regret that it is impracticable to lay down some positive regulations for the prevention of excessive loading. Numerous ships are sent to sea overladen, and some are lost in consequence ; but no regulations can be framed, for the purpose of securing a sufficient freeboard, which would not inflict grave injustice, more especially affecting owners of vessels of small tonnage, engaged in the coasting trade.

Objection to Mr. Plimsoll's proposal for survey

The other proposal contained in Mr. Plimsoll's Bill is to the effect that every British ship shall be surveyed, unless provided with a certificate of survey, and classed at Lloyd's, in the Liverpool books, or by some other British or foreign corporation approved by the Board of Trade. A certificate of seaworthiness from a Government official tends to remove responsibility from those persons on whom it ought to rest, and to deprive the Board of Trade, as the public prosecutor of blameworthy shipowners, of the right to bring home to them their proper share of blame for avoidable disasters. The official survey, which all ships sailing under the French, Belgian, and Italian flags are compelled to undergo, has become a mere formality. The underwriters and merchants entirely disregard the certificates thus obtained, and refuse to accept them as a guarantee either for seaworthiness or fitness to carry a dry and perishable cargo.

Would hamper shipbuilders

It would follow as a necessary consequence of the introduction of a Government survey, and the acceptance of certificates granted by private associations as of equal authority with those issued by the Government, that the regulations of the private associations must be approved by the Board of Trade. Immense evils would undoubtedly follow from the exercise of such a control over the genius and invention of our shipbuilders. The proportions of length to breadth, of steam-power to tonnage, involve considerations of the most serious and subtle character in regard to the form and construction of ships. These, indeed, are problems which cannot be solved without much experiment at sea; and this practical experience will be first accumulated by those engaged in the merchant service, and be derived from them by the Board of Trade, under whose authority it has been proposed that they should work.

Frequent survey would be necessary

It is further to be observed that the survey of a ship must be minute and thorough, and repeated at frequent intervals, or it will be impossible to grant an honest certificate of seaworthiness. A shipowner whose only motive for keeping his ship in seaworthy condition is his fear of the surveyor, will probably be negligent or parsimonious in many details of essential importance to safety at sea, but which cannot be regulated by Government inspection. The present writer has fitted out yachts of various classes, ranging from the smallest dimensions to considerable tonnage, and he can testify, from experience, how impossible it is to secure that ships shall be perfectly equipped in every respect by the mere inspection of surveyors, which, however conscientious, must be cursory and incomplete in many ways.

Mr. Farrer on the difficulties of surveyors

'It is,' said Mr. Farrer, 'utterly impossible for any surveyor to form an accurate judgment about a ship and her machinery when she is presented to him completely finished, painted, and cemented. . . . In my position, I perhaps see more of the difficulties of a survey than of its benefits; but I do see that it may produce some very great evils, and I am the more afraid of it, because the difficulties are insidious evils—they do not appear on the surface. Last week, a very competent surveyor sent up to say, "Ought you not to require that every ship shall have a double crank to her pump, in case one breaks; and ought not every ship to be provided with a cold-chisel axe, to cut metal in case of danger?" Captain Murray says, "I should never think of going to sea without these things." But where are you to stop? If we were to lay down strict rules, every shipowner or builder would build down to our rules, and that is the danger of which I am afraid.'

Under the present rules, the Board of Trade require

Adjustment of compasses. Qualification of examiners

that the compasses of every sea-going passenger-ship shall be properly adjusted. There are no means of ascertaining the competency of the persons whose certificates as to adjustment are accepted by the Board. I called attention to this inconsistency in a paper read before the Institute of Naval Architects; and the Council of that body called the attention of the Government to the importance of giving a definite professional status to the adjusters of compasses. If the present rules remain in force, it is desirable that the qualifications of adjusters should be ascertained by an appropriate examination.

Responsibility of shipowner

The objections urged to the system of a Government survey are not taken from a shipowner's point of view. They rest on the essential principle that complete responsibility for sending his ship to sea in a seaworthy condition should lie with the shipowner; that negligence of duty in this regard should be punished as a grave offence; and that it cannot be so punished if the shipowner is shielded from the consequences of his neglect by being furnished with a Government certificate.

Opposition to Government survey by small shipowners

The opposition to the proposal for a Government survey has been represented by fervid declamation as likely to come from wealthy shipowners, rich in gains ill-gotten by risking the lives of honest seamen, compelled by necessity to go to sea in rotten ships. The wealthier shipowners are almost universally owners of ships classed in a high grade at Lloyd's or elsewhere, with a view to insurance on the most favourable terms. If their ships, like those of the Cunard and some other famous lines, do not happen to be classed, it is not because they are not kept up in such a manner as to satisfy the most exacting requirements. The outcry which would follow the imposition of severe conditions as to equipment and repairs by Government surveyors would come from poor mariners and their families, who have passed their lives in the too crazy ships of which they are the owners. When vessels of this class, however unfit to pass a rigorous survey, have been safely navigated from port to port along the coast for a quarter of a century and more, would it not be esteemed an arbitrary thing that an official of the Government should at last swoop down on these unfortunate people, and, by prohibiting their vessels from again proceeding to sea, unless repaired at a cost entirely beyond the means of the owners, deprive them of their only means of earning a livelihood? It will be remembered that a vessel in the coasting trade, having almost always a harbour under her lee, and being manned by a crew familiar, from their long local experience, with every sign of the coming weather, with every available creek and harbour, and all the sets of tide and every danger of the navigation, may, if great caution be used, be safely conducted from port to port; although if entrusted to a less experienced crew, the danger would be so great that the surveyors would be under an obligation to detain the ship in port. With these considerations before us, it is obviously impracticable to draw the line equitably between the vessels that should be detained, and those which, although equally unseaworthy, may be allowed to go to sea in reliance on the discretion and special experience of their masters and crews. It would be an injustice, which the Legislature would never sanction, to deprive poor men of the only means of earning their bread, for the sake of restraining a few nefarious shipowners who can already be reached through the existing laws. It seems clear that a proposal for a general and continual

Effect on small coasting vessels

survey of our merchant shipping by the Government ought not to be adopted.

Collisions and insurance

It were needless to continue further discussion of the specific proposals referred to the consideration of the recent Royal Commission. It will, however, be remarked that no attempt has been made in Mr. Plimsoll's Bill to deal with two other principal causes of loss of life at sea. I refer to collisions and to the ill effects of our laws relating to insurance, under the operation of which it may, under certain circumstances, be a pecuniary benefit to the shipowner to lose his ship.

Penalty for bad look out

As to collisions, the suggestion offered by the Royal Commission, that officers and look-out men should be more severely punished for neglect of duty, will probably be found to be the best practicable means of securing greater watchfulness.

Limitation of insurance

The limitation of insurance upon ships is a more important and a far more complicated problem. Insurance lies at the very root of the question of security of life at sea; and the Legislature ought not to be deterred by an appreciation of the inherent difficulty from making an earnest effort to grapple with the question.

Opinion of Mr. Harper

As it was plainly put by Mr. Harper, the able secretary of the Salvage Association at Lloyd's, 'It is in the very nature of things, and in human nature, that a rule of law which enables the assured to recover more than the value of the property insured must have a tendency to make the shipowner or master negligent. If a man is in this position, that if he keeps his ship it is worth 8,000*l.* to him, and if she is lost it is worth 10,000*l.* or 12,000*l.* to him, what other deduction can you possibly draw but that he must have a bias in the direction of trying to get the 10,000*l.* or 12,000*l.*? . . . If you were to do away with insurance altogether, I think the business of this Commission would be at an end directly. . . . The care of a ship divides itself into a hundred particulars—care in the appointment of a master, care in the selection of a crew, care in the condition of the ship when she leaves, and general watchfulness; and I say that it is certainly likely to be relaxed in the case of an owner who knows that if his ship goes to the bottom, perhaps from the very circumstance that he has not paid sufficient attention to her, he not only gets the whole of his money invested in the ship, but a large profit besides, into his pocket.'

Shipowner should not gain by loss of ship

The dangers arising from the anomalous condition of the law and from the complete indemnity from loss which, in any case, it should still be permitted to the assured to secure, have been further aggravated by the keen competition for business of this description, both on the part of rival insurance companies, and from the excessive number of private underwriters at Lloyd's.

Gain to the owner by full insurance

The owner of a ship may, as is explained in the report of the Commission, 'insure his ship for her full value; he can also insure his cargo, he can insure the freight, and, beyond these insurances, he can insure ten per cent. profit on the cargo.' If a ship bound to Calcutta, *viâ* the Suez Canal, be lost on the outward voyage, the whole of the amount insured will be recovered, although the owner will have saved, owing to the loss of the ship at the inception of the voyage, a large proportion of the seamen's wages, the dues for the Suez Canal, port charges in Calcutta, and expenses in London on the ship's return. Here the owner is a clear gainer by the loss.

Damage equal to value of ship

Again, a ship is said to have sustained a constructive total loss if she has been damaged to such an extent that the cost of repairs would exceed the value of the ship when repaired. Under the existing law, the shipowner's interest may often be to make out a case of total rather than partial loss.

Partial damage

While it is the interest of the underwriter that the ship should be insured for her full value, because in case of partial damage under 3 per cent. he pays nothing, on the other hand the shipowner has an interest in undervaluing his ship, for he has a less premium to pay, and a better chance of recovering the amount of his partial loss from the underwriter.

Valued policies

There are objections to valued policies—that is to say, policies in which the value of the property is fixed arbitrarily by agreement between the shipowner and the underwriter, and sometimes at an amount greatly in excess of her actual value. Valued policies have, however, been found of such utility for the convenient conduct of commercial transactions, that the Royal Commission have not thought fit to recommend any alteration of the law relating to valued policies, even in cases of total loss. These cases are not more than as one to twenty of the proportion they bear to the number of partial losses ; and the evils of the system of valued policies are not in the case of partial losses of a very serious nature.

Points of insurance unfair to shipowner

Some of the anomalies of our law of insurance tell unfairly against the shipowner. He cannot recover from the underwriter the amount of the wages he is bound to pay to the master and crew of the ship during the time she is under repair. Again, in voyage policies any deviation from the voyage, however slight, avoids the policy.

Recommendations of Commission as to insurance

The recommendations of the recent Commission on the subject of insurance were of necessity cautious, and restricted in their scope. They have advised that the shipowner's liability for damage to property or person should be unlimited, and that he should be made liable under Lord Campbell's Act to the family of the deceased seaman in cases where the death of the seaman has been occasioned by the ship being sent to sea in an unseaworthy condition. They have expressed an opinion that 'any provision in a bill of lading or other agreement having for its object or effect to avoid or limit the liability of the shipowner in such cases ought to have no legal validity.' Finally, they have said that the 'shipowner should not be enabled to recover his insurance, whether under a time or voyage policy, when it could be shown that he or his agent had not adopted reasonable means of making and maintaining his ship in a seaworthy condition, and that unseaworthiness was the cause of the loss.'

These are positive recommendations of the Royal Commission ; but readers of the Report cannot have failed to perceive, from the brief exposition of the law which it contains, that an urgent necessity exists for a careful examination and revision of our present rules.

Principles of the law of insurance

The law relating to insurance has been made what it is, as well by the decision of judges as by the express enactment of Parliament. The judges have sought in their successive decisions to observe, on the one hand, the cardinal principle that the sum recoverable under a policy of marine insurance should not exceed a fair indemnity to the assured for his loss. On the other hand, where an agreement has been entered into between a shipowner and an underwriter, both of whom are presumably perfectly acquainted with the nature of their mutual obligations, there is an obvious objection to allow either party to escape the performance of his contract, except in a case of fraud.

The law complex and difficult

The law on this subject, inevitably complex and difficult, has become the more complicated from want of a general code. I cannot express my own views as to the course we ought to follow more clearly than by quoting a few passages from the Report, in the preparation of which I have taken a humble part :—

'Our whole system of insurance law requires careful revision, for not only does it allow the assured in some cases to recover more than the amount of the loss actually sustained by him, but it also, on the other hand, deprives him of an indemnity in cases in which he ought to be protected by insurance. . . .

Revision required. Insurance should be a contract of indemnity

'It is difficult to interfere in the complex arrangements which have grown up with the growth of trade without incurring the risk of some new danger, while we are endeavouring to promote safety at sea. It would, therefore, be unjust to interfere with the contract between the assured and the underwriter, unless our whole system of marine insurance were completely revised and amended, so as to restore marine insurance to what is its true character and only legitimate object—namely, a contract of indemnity, which should protect the assured from losses occasioned by events over which he has no control. . . .

An international code desirable

'A complete and thorough revision of our law relating to marine insurance is, however, a task of equal importance, difficulty, and delicacy, requiring evidence of an extensive character, and necessitating a very lengthened and careful investigation. It touches directly on so many subjects unconnected with the security of life at sea, on which it has only an indirect and somewhat remote bearing, that it did not properly fall within the scope of a "Commission appointed to examine the causes of the deplorable loss of life at sea in British vessels." . . . It is important that, before the task is undertaken, an attempt should be made to induce foreign nations to concur with us in framing and adopting a general code of insurance law. To alter the English law of marine insurance to any considerable extent might have the effect of throwing the business of marine insurance into the hands of foreigners, and there is so much insurance of foreign property in England, as well as of English property abroad, that it is most desirable that the law of marine insurance should, as far as possible, be the same amongst all commercial nations, and an examination of foreign codes leads reasonably to the conclusion that there is no insuperable difficulty in the way of attaining this object.'

A Commission on revision of marine insurance desirable

A Commission appointed to revise the law of marine insurance should be strong, both in commercial experience and in the knowledge of legal practice and the principles of jurisprudence. No subject could more worthily engage the attention of the Government; and it is to be hoped that the suggestion of the recent Commission that the subject should be fully considered may not be unheeded by the present administration.

Unable to agree with Mr. Plimsoll, but consider the agitation has been useful

It will have been apparent from my observations on the proposals of Mr. Plimsoll that I am quite unable to accept them as likely in any way to promote the safety of life at sea. It will, I trust, be equally evident that I regard the agitation of the public mind on the subject of unseaworthy ships as having been productive of eminently valuable and important results. There is an inevitable tendency even in the most vigorously administered public department to occasional fits of drowsiness. The Board of Trade have been somewhat roughly aroused to action. The stimulus they have received has already led to some useful legislation, and will, doubtless, be followed by further legal and administrative changes, which cannot fail to prove a wholesome check on unscrupulous shipowners and foolhardy and careless seamen. The Board of Trade have shown a commendable independence in not surrendering their own better judgment to pressure from without. They have rightly maintained that it is their province to preserve an attitude of observation, rather than to assume responsibilities more properly belonging to the shipowners themselves.

Too much Government supervision detrimental to enterprise

Nothing could be more fatal to British maritime enterprise than a system of official inspection over every detail of this progressive and ever-changing branch of trade. The spirit of adventure which animated and so eminently distinguished our forefathers would never have been developed if they had been trained up in reliance on the protective care of the Government, rather than on their own independent forethought. How many expeditions, fruitful of blessing to mankind, would have been prohibited if the sanction of a surveyor had been required before the explorers were allowed to set forth on their voyage! As it was well put by Mr. Milner Gibson, in an able speech at the Trinity House, Columbus would never have won the honour of being the discoverer of America if in his time there had been a Board of Trade at Cadiz, with a president at their head responsible for the equipment of every ship in the port, and full of laudable zeal. The preparation of those quaint caravels for a voyage over an unknown sea would have filled a responsible public department with intolerable apprehension. The expedition would not have been allowed to start, and America would have remained undiscovered.

The mariners of England are inheritors of the glories of Drake and Raleigh, of Grenville and Frobisher, of Cook, and others in more modern times whose illustrious names are too many for enumeration ; and it would be a boon of doubtful value to substitute State control for self-reliance, the care of a too paternal Government for manly independence. Our high position among the maritime Powers was not first attained under such a system ; and a change of policy in our legislation could only be justified by the existence of evils irremediable by other means.

III

THE ADVANCE NOTE—WHAT IT IS, AND WHY IT OUGHT TO BE ABOLISHED

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Opposition to abolition of Advance Note

THE abolition of the Advance Note, as proposed in the Merchant Shipping Acts Amendment Bill of the present session, has raised some opposition among shipowners. The objection comes chiefly from the owners of sailing ships, the majority of steamship owners having already abandoned this objectionable system. The Advance Note is retained in sailing ships chiefly as a bounty to induce sailors to accept lower wages.

To the shipowner there can be little inconvenience from the proposed alteration in the law; but for the sailor a change in the mode of paying his wages might reasonably be supposed to be more serious. Public opinion would condemn arbitrary restrictions on the freedom of contract of a large body of working men. It is important, therefore, that the question should be examined in all its bearings, and that the practical effect of the abolition of the Advance Note should be properly understood.

The Advance Note explained

What, then, is an Advance Note? This elementary question can be most completely answered by an extract from the memorandum prepared by Mr. O'Dowd for the information of the Royal Commission on Unseaworthy Ships :—

'The shipowners at the several ports of the United Kingdom have felt it necessary to give seamen engaged for their ships an advance for every voyage of, generally speaking, one month's wage, to enable the latter to pay debts contracted by them for board and lodging ashore while waiting employment, and for the purchase of clothes and outfit requisite for the voyage. This is done, not by a money payment, but by an Advance Note in the following terms, delivered to the seamen generally by the shipping master at the port at the time the seamen sign the ship's articles in the presence of that officer :—

'"Glasgow, July 6, 1873.

Sample of Advance Note

'" Ten days after the departure of the ship —— from the last port or place in the River or Firth of Clyde, in which from any cause she may be, before finally leaving for the voyage for which this note is issued, pay to the order of (*seaman's name*) the sum of 3*l.* 17*s.* 6*d.*, provided the said seaman sails in and continues in the said vessel, and duly earns his wages, being advance of wages according to agreement.

'"(Signed) ROBERT DOUGLAS, Master.

'"To Messrs. HENDERSON & Co.,
'" Hope Street, Glasgow."

'The seaman endorses and gets this note discounted, sometimes by the keeper of the boarding-house, at other times by the clothier or dealer who supplies the goods, the discounter deducting 2*s.* per pound discount, and the amount due to himself for board and clothes.'

This system of Advance Notes was strongly con-

System condemned by the Commission

demned in the Report of the Commission. It was proved by the testimony of many witnesses that, while wages are paid in advance to seamen, presumably in order to enable them to provide the necessary outfit for a long voyage, in practice the Advance Note is rarely used for this purpose.

Evidence of Colonel Hill

Colonel Hill, the president of the Chamber of Commerce at Bristol, told the Commission that he had frequently seen sailors going on board the ships belonging to his firm in such a destitute condition that the police would have been justified in apprehending them for passing through the streets insufficiently clad. His captains had often told him that, in bad weather, they have given their own clothes to the man at the wheel, to enable him to remain at his post. Captains, as a private speculation of their own, are obliged to take out a supply of clothing. Considering that the Advance Note was so rarely used for a legitimate object, Colonel Hill was of opinion that little inconvenience and much good would follow from its abolition.

Evidence of Mr. Munro

Mr. Munro, the chairman of the General Shipowners' Society of London, told the Commission that sailors, finding themselves in possession of loose money at a time when it is especially difficult for them to resist temptation, give way to dissipation, and seldom join their vessels at the docks. Ships sailing from the port of London are almost always detained at Gravesend. The crews, when they join, are often quite helpless from intoxication, and a further interval of twenty-four hours must be allowed before attempting to weigh the anchor. If, from any cause, the ship puts into a port in the Channel, the seamen, having had a month's advance, desert, or demand their discharge, on the alleged ground of the unseaworthiness of the ship or the tyranny of the master. Even when their complaint has been heard by the magistrates and pronounced to be frivolous, some men will still refuse to return to their duty, preferring the alternative of thirty days' imprisonment. For the greater part of the term of punishment they have been already paid full wages in advance.

Opinion of Mr. Lindsay

The Advance Note is not only a temptation to dissipation, but a direct encouragement to improvident habits on the part of sailors. In the debate on the Merchant Shipping Act of 1854 Mr. Lindsay said :—'Sailors will not become more provident and thoughtful until they find that they cannot get a supply of money to fit them out for their next voyage if they waste what they have received from the last. They will then be forced to learn habits of economy, and to retain from each voyage at least as much as would be required to fit them out for another.'

Providence in other callings

Many artisans, and even unskilled labourers, to whom it is a hard struggle to make any provision for the future out of their scanty earnings, have to travel through the country, at their own expense, in search of employment. The railway navvy does not command the wages of a skilled workman. He is not pre-eminently distinguished for prudence and forethought. The nature of his occupation demands a liberal diet. But, with all these difficulties, whether arising from defects of character or the force of circumstances, the navvy does make provision for intervals of enforced idleness, and for the expenses of his periodical migration from one railway contract to another. By comparison with most other workmen, the seaman enjoys exceptional advantages. He need not travel from port to port in search of employment. He is engaged almost invariably in the same port and at the same shipping office at which he was paid off from his last voyage.

Evil effects of crimps

The only people who derive any substantial benefit from the Advance Note are the crimps, who discount the notes at extortionate rates. The sailor, on landing from a long voyage, surrenders himself, a too ready victim, into the hands of these harpies, whose corrupting influence upon our seamen is one of the dark blots in our civilisation. Those whose occupation takes them frequently to the vicinity of the docks are familiar with the painful spectacle of a ship, just returned home from India, China, or the Antipodes, surrounded, even before she has been moored to the quay, by a band of jackals, ready to pounce upon the seamen as they come ashore, and to lead them away to some miserable haunt, where the hard earnings of many months are consumed in a few days of vicious indulgence.

Evidence of Mr. Duncan

According to the evidence of Mr. Duncan, the shipping master from Glasgow, sailors in a boarding-house are rarely inclined to ship until they are almost obliged to do so. ‘A hint from the boarding-house keeper at last tells the seaman that he has been there long enough, and that it is time for him to look out for a ship. Perhaps he owes the boarding-house keeper two or three weeks' board, and there is money due for slops; and when he gets his Advance Note Jack has very little to receive out of it in cash.’ When there is no longer any prospect of extorting money from his victim, the crimp puts the sailor on board ship penniless and unprovided with an outfit.

Objection to abolition of Advance Note unfounded

It has been contended that, should Advance Notes be abolished, an almost insuperable difficulty will be experienced in manning ships. Under the present system, the crimp who has cashed an Advance Note has a direct personal interest in seeing that the seaman fulfils his engagement; for, if he fails to join his ship, the lodging-house keeper is unable to recover from the shipowner the advance he has made. It is not probable that such a consideration would have weight with the legislature; but, assuming the case to be argued from that point of view, if Advance Notes were abolished, the boarding-house keeper would give no credit, and the sailor, as soon as his past earnings were exhausted, would be obliged to go to sea.

System condemned by many authorities

It will be seen from the report and the evidence taken by the Duke of Somerset's Commission, that the Advance Note has been condemned by many most experienced authorities. Mr. O'Dowd has said that of all the evils connected with the merchant service, the very worst is the Advance Note. The system was condemned by the Liverpool Committee of Inquiry into the Condition of our Merchant Seamen, both in their preliminary report in 1870, and in their latest report in 1874. The Liverpool Committee has led the way in the path of inquiry, and in the more difficult task of contriving remedial measures for the improvement of the seamen. The members of the Committee were men of experience in maritime affairs, including, among others, Messrs. Allan, Balfour, Beazley, Forwood, Ismay, MacIver, and Williamson, with whom were associated two ship-captains, eminent in their profession—Captain Ballantine, sometime Commodore of the Allan line, and Captain Judkins, sometime Commodore of the Cunard service.

The Liverpool Committee

The Committee on the Advance Note

In their original report, the Committee quoted, with full approval, certain observations made by a well-known shipowner of the port of Liverpool. 'We think,' they said, 'the Advance Note is one great cause of the deterioration of our seamen; without it the crimp's occupation would be gone; there would be no inducement for him to get worthless scamps to sign articles. He now ships these men for the Advance Notes alone, and the man gets little or no benefit from it. To the sailor by profession the want of an Advance Note would be no hardship: he would be free from the competition of these worthless fellows. Without the Advance Note, a better average of men would be kept up, and the objections now existing with the parents of decent boys who have a taste for the sea against their entering that profession would be removed, or, at any rate, modified.'

Shipwrecked seamen. Benefit of Advance Note

The Committee admitted that there might be cases where the abolition of Advance Notes would press hardly; as, for example, in the case of poor shipwrecked seamen. For such cases a remedy would be provided. The hardships that might possibly occur in these rare instances would be as nothing when compared with the great good that would certainly be obtained by making the Advance Note illegal.

Objection to abolition in English ports

It has already been stated that objection has been raised to the abolition of the Advance Notes in English ports. To this opposition, as represented in the House of Commons, the Government have surrendered without an attempt at resistance. In the debates in Parliament the advocates of the Advance Note insisted chiefly on the injustice which would be done to the sailor if he were deprived of the means of procuring an outfit. But this difficulty would have been effectually removed by providing on every ship bound on a long voyage a supply of clothing of approved quality, which it should be the duty of the shipowner to sell to the seamen at prices to be regulated by the Board of Trade. Proper clothing is not less essential than a supply of lemon-juice. If it had been provided that the quality and the price of the stores of clothing supplied to ships should be the subject of Government regulation, the abuses incidental to the system of truck payments would have been effectually excluded from the Merchant Service.

Advance Note not necessary for married seamen

The Advance Note is not necessary to enable married seamen to make provision for their families. Masters of ships can send orders from abroad for the payment to the wife and family of a seaman of any sum certified to be due to him from the shipowner. At many foreign ports the money-order system is established, and it has been largely used by seamen. The Liverpool Committee, while recommending that Advance Notes be rendered illegal, point out that, by means of the Allotment Note, a sailor can make provision for those dependent upon him for support.

Seeing, then, that there is no necessity for the Advance Note—that it benefits none but the boarding-house keepers, who live upon gains ill-gotten by plundering and debauching improvident seamen, Parliament should no longer hesitate to put an end to a system susceptible of so much abuse.

Gradual abolition advocated

Those who accept the views put forward in the preceding pages as just and reasonable would probably give their unreserved approval to the abolition of Advance Notes. That such a decision should ultimately be reached is, in the true interest of the sailor, most devoutly to be desired. But where a particular custom has been long established, hasty legislation may sometimes bear harshly on the individuals more immediately affected. The proposal for the abolition of the Advance Note may therefore be modified. It may be expedient to allow time to elapse before the seamen, brought up in dependence on future earnings, are required to surrender an established custom. The more convinced we are of the enervating tendency of the practice we seek to disturb, the more desirous we shall feel to act in a considerate spirit.

Amount of advance should be limited

These arguments point to the expediency of proceeding with the abolition of the Advance Note by a gradual process. In the first instance, Parliament might place a limit on the amount of the advance which the shipowner should be authorised to give to the seaman. A compromise has been proposed by Mr. Wilson, the member for Hull. The amendment he has introduced provides that Advance Notes for crews shipped for long voyages round the Horn and the Cape, or through the Suez Canal, should be limited to one month's wages, and that for voyages of less extent a fortnight should be the limit. As a moderate step in the right direction such a proposal would probably commend itself to Parliament. A judicious compromise would be a convenience to those seamen, probably few in number, who have been in the habit of relying on their Advance Notes for making provision for their wives and families before embarking on a voyage. It need scarcely be pointed out in this connection that, in the long run, married men derive no real gain from the system of Advance Notes. The seaman, if he draws a month's wages in advance, has so much the less to receive on his return home.

The crimps the real opponents of abolition

The promoters of the mass meetings to protest against the abolition of the Advance Note are not the chosen and trusted representatives of the seamen, but the crimps, who alone make a profit by this evil custom. Is it right that we should be deterred by the remonstrances of a giddy and heedless crowd from pursuing the course which the wisdom of the statesman and the practical experience of the sailor alike approve?

We, ignorant of ourselves,
Beg often our own harms, which the wise powers
Deny us for our good.

The moral condition of seamen, as well as their security at sea, a worthy object

It may be that the abuses arising from the practice of giving Advance Notes are of secondary consequence when compared with the greater issues raised by Mr. Plimsoll. Many who now feel a passing, though an earnest, interest in our shipping legislation have been drawn to the subject solely by the desire to lessen the loss of life at sea, and they may view with indifference any proposals for reforms which do not directly tend to promote the security of life. It may, however, be asked whether the moral condition of the seaman is not an object worthy the care of those who are zealous to protect him from personal suffering and danger. The improvidence of seamen has long been proverbial; and the system of payments in advance has done harm to a class of men brave and true-hearted, but, by natural disposition, careless of the future. The sailor has been deprived of the same inducements to self-denial in prosperous times which operate on the minds of other men, and have exercised a potent influence in elevating and strengthening the character of the operative and industrial classes.

IV

THE LAW OF MARINE INSURANCE

SPEECH IN HOUSE OF COMMONS, MARCH 20, 1875

MR. BRASSEY, in drawing attention to the evidence relating to marine insurance taken by the Royal Commission on Unseaworthy Ships, said that it did not require a legal training to perceive the evils of the present state of the law. He could show that the facility for insuring at the full, and sometimes at an exaggerated, value was a primary cause of carelessness and recklessness, and of the consequent deplorable loss of life at sea. The extent to which marine insurance had been allowed to exceed that mere indemnity for the loss which alone it was originally intended to secure could best be realised by a striking illustration, furnished by Mr. Cohen to the Royal Commission. The ship 'Sir William Eyre,' valued at 8,000*l.*, sailed from Glasgow to Otago in 1863. She was damaged on the outward voyage, and temporary repairs were effected at Otago at the cost of the underwriters on the outward freight. The ship proceeded to Calcutta, where she was again surveyed and found to be not worth repairing. She was lost shortly afterwards in the cyclone of October, 1864. The damage which the vessel was found at Calcutta to have sustained having been caused by her being stranded before she reached

Evils of present system

Case of the 'Sir William Eyre'

Otago, the underwriters on the policy to Otago were held liable to pay 6,000*l.* The shipowner had insured in the sum of 4,000*l.* the chartered freight homewards from Calcutta ; and as the ship had become a constructive total loss, the House of Lords held that the underwriters were bound to pay the 4,000*l.* Finally, the shipowner, before he knew his vessel had been seriously injured, had insured her in the sum of 8,000*l.* by a time policy for three months after her arrival at Calcutta, and although the ship, when insured, was a total loss, he recovered his insurance. The total sum thus recovered amounts to 18,000*l.* on a ship valued at only 8,000*l.* by the owner himself. That was, no doubt, an extreme case ; but other cases in which shipowners had recovered from the underwriters sums far exceeding a fair indemnity for their loss were of constant occurrence.

Anomalies of marine insurance. The valued policy

With respect to the anomalies which had arisen under the various policies of marine insurance, he would advert to the case of the valued policy. It might reasonably have been supposed that where the value expressed in the policy exceeded the real value of the property insured, the Courts would refuse to sanction the overvaluation. Such, however, was not the doctrine of our law. The underwriter was not allowed to set aside the value as stated in the valued policy except upon plea and proof of fraud. Mr. Justice Willes, in a memorandum, said that the system of valued policies, whatever its conveniences, did encourage fraudulently disposed people to put high values on comparatively worthless vessels, and gave them an interest in the loss of the property. The remedy suggested by Mr. Justice Willes for the abuses incidental to valued policies was approved by Mr. Lamport, by Mr. Stevenson, some time secretary to Lloyd's,

Suggestion by Justice Willes

by Mr. Squarey, Mr. Farrer, and others. All these authorities agreed that where the underwriter had reason to believe that the valuation in the valued policy was excessive, he should be allowed to plead such over-valuation as a defence to a claim on the part of the shipowner. It was the opinion of Mr. Lamport that this concession to the underwriter would not lead to vexatious litigation, and that while the value would not be disputed, unless in gross cases, shipowners would be deterred from paying premiums on their ships for larger amounts than they would be entitled to recover in the event of loss.

The question of freight. Hypothetical case

He would now advert to the open policy, or that in which the value was not fixed, either for ship, freight, or goods. The most striking anomaly under the open policy arose in connection with the question of freight. To show how this worked in practice he would take a case put before the Commission by Mr. Farrer. A steamer of 1,200 tons, bound for Calcutta and back through the Suez Canal, with a chartered freight on the outward and homeward voyage of 12,000*l.*, was insured in an open policy at the full value. Suppose the ship to be lost on the outward voyage, in the Bay of Biscay, the shipowner was entitled to recover the gross freight of 12,000*l.*, although by the loss of his ship at the commencement of her voyage he had avoided paying for Suez Canal dues both ways 1,200*l.*, for coals at Calcutta 1,600*l.*, as well as the expenses for provisions at Calcutta, wages to the crew, and port charges at Calcutta and London. The total saving by the loss of the vessel at the commencement of the voyage would thus amount to 4,500*l.* Now, could any law, he asked, be considered satisfactory which permitted the shipowner to derive such an immense advantage if his ship were lost as soon

Unsatisfactory nature of the existing law as she left port, instead of completing the voyage for which she had been insured? As a remedy for the strange inconsistency of the law, it had been suggested that the underwriter should be entitled to deduct from the amount payable to the shipowner on open policy on the freight all expenses actually saved by the loss of the ship. The object of this amendment might, indeed, be defeated if the shipowner were to insist on repayment of freight, inasmuch as the merchant, in the event of the ship being lost, would not be entitled to recover the freight paid in advance. But that doctrine was peculiar to our law, and had recently been disapproved by the Lord Chief Justice and the other judges.

Voyage and time policies

Under the voyage policy the ship required to be seaworthy at the commencement of the voyage; but having once set forth, no subsequent unseaworthiness voided the policy; and thus neither shipowner nor shipmaster had a continued interest in keeping the ship in a seaworthy condition. A time policy, again, allowed a shipowner to recover his assurance, even though the vessel which was under his control were unseaworthy, while the innocent proprietors of goods, being obliged to insure under a voyage policy, forfeited their claim on the underwriters in the case of the unseaworthiness of the vessel being proved. It was true that shippers of goods had a claim for compensation against the shipowner, but, by the bill of lading usually employed, shipowners had succeeded in contracting themselves entirely out of this obligation. It had, therefore, been proposed that no words introduced into the bill of lading should exonerate the shipowner from the obligation to make and keep his vessel in safe condition; and that the underwriter should not be held liable for loss, whether under the time or voyage policy, unless it were

Obligation of shipowner and liability of underwriter proved that the shipowner and shipmaster had used all reasonable efforts to make and keep the ship seaworthy. Juries, as a general rule, had been too partial to shipowners, and the Commission on Unseaworthy Ships therefore recommended the adoption of a tribunal consisting of a judge and two assessors for the trial of marine cases.

Revision of the law of insurance desirable

But it was not to be supposed that the abuses which had gradually crept into the practice of marine insurance could be removed by any partial measure. The Commissioners recommended a complete revision of the whole system of insurance law, and in his opinion, if an international agreement could be arrived at on the subject, it would be so much the better. The law of marine insurance was composed of materials drawn from the custom of merchants, the statutes of the realm, and the decisions of able and impartial judges, and should not be altered without the most careful consideration of the probable effect of the changes proposed in relation to the seaworthiness of our shipping. Because abuses had grown up in the law, marine insurance must not, on that account, be condemned. He knew how unjust it would be to draw an indictment against the shipping interest as a class. In shipping, as in every other profession and industry, the presence of competition was keenly felt, and when unjustifiable risks were run, in most cases it would be found that the owners were struggling to make both ends meet. He understood that the Government had in contemplation a Committee to prosecute an inquiry into the subject. But no Departmental Committee would command the authority which would attach to a Royal Commission working under the presidency of an eminent judge. If they could compel every shipowner to be to a certain extent his own

A Royal Commission advocated

insurer, or if they could prevent excessive valuation, all other legislation with a view to the safety of life at sea would become superfluous. Those who were opposed to load lines and surveys said truly that the commercial instinct of the shipowner and the experience of the shipmaster were the most reliable guarantee for the seaworthiness of shipping, and that Government surveyors could not have the same practical knowledge as persons actually engaged in the trade. But that commercial instinct must be less keen when, by the over-valuation of the ship and freight, the owner stood to win and not to lose by the loss of his ship. The aim of future legislation must therefore be to confine marine insurance to a simple contract of indemnity. Thus limited, it might justly be regarded, to use the language of Jeremy Bentham, as 'one of the most beneficial inventions of civilised society.'

Marine insurance to be simply a contract of indemnity

V

A PENSION FUND FOR SEAMEN

Speech in the House of Commons, March 10, 1876

Mr. Brassey, in rising to call attention to the present condition of our merchant seamen, and to the Report of the Royal Commission on Pensions to Seamen, and to the regulations in force in foreign countries for providing pensions to seamen, and to move a resolution thereon, said :—Sir, in order to justify the motion which I desire to submit to the approval of the House, I shall not consider it necessary to allege that our seamen have deteriorated. I believe that there are in our merchant service many ill-conducted and inefficient men, while there are happily a still larger number who are the best seamen in the world. I would rather insist on the miseries and hardships inseparable from a sailor's life. It is on this ground, and because our national security and greatness are mainly dependent on the loyal attachment of our seamen to their native land, that I would especially urge the re-establishment of the Seamen's Pension Fund.

A Pension Fund urged on account of hardships of seamen's life

Recommended on many occasions.

The subject has been frequently investigated by Royal Commissions and by Parliamentary Committees, and they have invariably recorded a strong opinion in favour of the establishment of a Seamen's Pension Fund.

The fact that no practical legislation has resulted is a convincing proof that the special interests of seamen have been too long neglected. That negligence has arisen, not so much from lack of sympathy, as from ignorance of the condition and necessities of a class whose calling keeps them apart from the great mass of their fellow-countrymen. The efforts of the hon. member for Derby (Mr. Plimsoll) have of late aroused the deepest interest in seamen, and my hope is that I may be able to obtain for the proposal I now submit to the House a support which, under ordinary circumstances, I could scarcely hope to command.

System in France. Colbert founded Invalides de la Marine

The example of foreign nations supplies me with an important argument. A plan for securing pensions to seamen was established in France by the great Minister, Colbert. The fund of the Invalides de la Marine is supported by contributions of 3 per cent., deducted from the pay of all persons in the national or the merchant service. In 1844 the fund had an invested capital of 4,000,000*l.* sterling, and an income of 300,000*l.* a year. Mariners became entitled to pensions after their names had been borne for 25 years on a ship's articles, and they had attained the age of 50. The pension varies from 600 f. to 96 f. a year, according to the grade of the pensioner. Widows receive half the pension to which their husbands were entitled, and an allowance is made to children.

The United States

In the United States there is a benefit fund, supported by a compulsory deduction of 20 cents per month from the seamen's wages. Every worn-out or disabled seaman is entitled to maintenance in one of the asylums established by the State on the American seaboard.

Norway

In Norway, by the Royal rescript of 1834, an independent charitable institution for seamen has been founded in the principal seaports ; and at the time when seamen sign their articles of agreement for a foreign voyage, it is usual to agree upon a *pro rata* contribution to the institution established in the port from which he sails. The Scuola di San Marco, at Venice, is an institution very similar to that of the Invalides de la Marine in Paris. In Holland there is an institution called the Seamen's Hope, on a somewhat similar plan to those established in Norway and Sweden.

Italy

Holland

Great Britain. Seamen's Pension Fund of 1747.

In our own country a Seamen's Pension Fund formerly existed. It was established by Act of Parliament in 1747, in compliance with a petition from merchant seamen. Its object was to give to the merchant service the same advantages which the Navy enjoyed at Greenwich. It was supported by a contribution of 1*s.* a month, which was stopped from each man's wages ; and the fund received liberal contributions from great merchants and shipowners. It worked extremely well until the year 1820, when our great merchants unfortunately withdrew from the shipping trade. From that period their voluntary contributions rapidly fell off. In the meanwhile a fatal laxity had crept into the management, the results of which were described by Admiral Denman in his evidence before the Manning Commission of 1859. While the State was responsible for the management of the fund, its administration was entrusted to a local committee at each port. There was no general system, and no effectual audit was provided. Hence arose jobbery, confusion, and eventual bankruptcy. At one port pensions of 13*l.* were paid ; at others the amount was 2*l.* or 3*l.* ; and again at others it was as low as 10*s.* A widow at Sunderland, aged 84, received 2*s.* a month ; while a widow at Liverpool, aged 24, received 14*s.* for herself, and 12*s.* each for her

Defective management

children. Such inequality justly created discontent, and the fund being bankrupt, a Winding up Act was passed in 1851. The process has already cost 1,000,000*l.*, and will probably cost 500,000*l.* more.

A pension advocated by many authorities

But no objection has ever been taken to the principle of a compulsory self-supporting Pension Fund by those who are best acquainted with the condition of our seamen. The Select Committee on Lighthouses, in 1845, strongly insisted on the necessity for such a fund. The Royal Commission on Pensions, appointed in 1848, made a report, which is still the best authority on this subject, and which was entirely in favour of continuing the Pension Fund, under improved regulations. In 1853 the Prince Consort, as Master of the Trinity House, addressed a letter to Lord Cardwell, then President of the Board of Trade, in which he urged, on behalf of the Elder Brethren, the importance of substituting for the Corporation's charities a more comprehensive scheme, such as should do honour to the great maritime and commercial character of the United Kingdom. The Manning Commission of 1859 gave great prominence to this subject in their report. They said that, among the many suggestions which had been offered to them, none had been so ably advocated as the re-establishment of the Merchant Seamen's Pension Fund; and that such a provision would be a great inducement to youths to join, and to seamen to remain in, our merchant service. The Committee on Merchant Shipping of 1860 concurred in this view, and pointed out the great facilities afforded for the administration of the fund through the shipping offices, which had recently been established.

The Manning Commission of 1859

Liverpool Committee of Shipowners

Passing over an interval of several years, I may quote as the latest authority on this subject the Report of the Liverpool Committee of Shipowners on the condition of our merchant seamen. They were strongly of opinion that, both in the general interests of commerce and the nation, as well as of our merchant seamen, a compulsory benefit fund should be established, there being at present no provision for old or disabled seamen, except the workhouse. The existence of such a fund would serve to bind the sailor both to his ship and his country by the consideration, now almost unknown to him, of having something to lose by deserting his ship when abroad. Lastly, the Royal Commission on Unseaworthy Ships expressed their opinion that a self-supporting Pension Fund for Seamen might prove of great value, in creating a tie to bind the British seaman to the merchant service of his own country. The subject, they said, well deserved the attention of the Government. The concurrence of these eminent authorities supplies a conclusive argument in favour of a Seamen's Pension Fund; and a calm consideration of the proposal on its merits cannot fail to satisfy the House that it is both reasonable and necessary. Seamen are a scattered body. Their lives are spent far away from home, and when they return it may often happen that they are not paid off at the port at which they originally shipped. They cannot, therefore, organise a machinery for collecting contributions or administering the funds required to provide sufficient pensions. The task, in short, is so extensive in its scope, and important in a national point of view, that it can only be carried out by the Government, and this is the conclusion at which every Commission and Committee, during the last thirty years, has arrived.

Royal Commission on Unseaworthy Ships.

Fund should be administered by Government

The necessity of making the contributions compulsory is the only point on which doubt has been felt.

Doubt as to making contributions compulsory

The majority of the Manning Commissioners proposed that the Pension Fund should be self-supporting but voluntary. The contribution for the Naval Reserve was to be paid by the State ; but they wished to admit to the benefit of the fund every seaman, whether in the Navy or the merchant service, who might think proper to contribute. Mr. Lindsay differed from the other Commissioners ; and his opinion, which is of the greatest value, was that any pension fund on the voluntary principle would be a failure. These views were shared by all the professional officers of the Board of Trade. The late Mr. Graves told the Merchant Shipping Committee of 1860 that, although he did not like compulsory measures, yet he thought in the case of the Seamen's Pension Fund compulsion would be a necessity. The same opinion was expressed by Captain Ballantyne, who was specially appointed to represent the views of the Mercantile Marine Association of Liverpool before the Royal Commission on Unseaworthy Ships. The views of those who are in favour of compulsory contributions were very ably summed up in the memorandum prepared for the Manning Commission by Captain Peirce, Superintendent of the Sailors' Home, in London. 'Seamen,' he said, 'were an exceptional class.' What other description of men required their agreements for labour and service, the correction of their accounts, and the payment of their wages to be watched over by a public officer ? This arose from their habits, and their peculiar duties. From youth to manhood they were exposed to temptations and dangers, by sea and land, which surrounded no other class ; and they therefore required more than others the protecting arm of a kind and beneficent Government to do for them what they could not and would not do for themselves. Why is it that the

Evidence in favour of compulsory contributions. Captain Peirce seaman does not calculate? It is because the universal feeling among seamen is that they will not live to be old. They see so many die around them, they so seldom meet with an old sailor at sea, that they consider it quite unnecessary to prepare, as other people do, for the contingency of old age. But, it may be asked, what are the views entertained by the seamen themselves? Inquiries were made in 1845, on behalf of the Board of Trade, by Captain Brown, who reported, as the result of conversations with many hundreds of seamen, that there was scarcely any objection to contribute, provided a substantial pension were guaranteed by Parliament. Again, when the Winding-up Act was passed, a petition was presented to this House, signed by 400 masters and mates and 700 seamen, stating that any attempt to raise a pension fund on a voluntary principle would be precarious and inefficient.

Board of Trade inquiries in 1845

Personal inquiry

I have recently made an effort to ascertain the feelings of the seamen by personal inquiry. I addressed a meeting at the Liverpool Sailors' Home in December last on this subject, when a resolution was unanimously passed in favour of the plan. I have subsequently been in correspondence with the Secretary of the Seamen's Protective Society, of Liverpool, which numbers several thousand members, all able seamen; and I am informed that since the date of the meeting the subject has been repeatedly considered by the Society, and that the general principle of compulsion has been invariably approved. Ten days ago I attended a meeting of seamen at the Shipping Office in the East India Road, when the plan was also received with the warmest approval.

How the Fund should be raised

But the main point we have to consider is whether the thing proposed is right in itself; for if the House be satisfied that a particular measure is calculated to do

Different suggestions

good, they will probably be prepared to exert, in case of need, a gentle pressure on prejudiced or improvident men whom it might be necessary to train up in habits of prudence. Any objection which might be raised on the part of the seamen to a forced contribution would be removed if the shipowners were prepared to take a share of the burden. Lord Ellenborough suggested a tonnage contribution of 1*s.* a ton, arguing that it was but just that the shipowner should relieve those who would otherwise become chargeable with the maintenance of the seamen by whose labour the shipowner himself had specially benefited. Mr. Young, the chairman of the London Shipowners' Society, proposed that the necessary sum should be raised in three equal amounts —by contributions from the State, the seaman, and the shipowner. With these views Mr. Green and Mr. Dunbar concurred. More recently the Committee of Liverpool Shipowners have proposed that a benevolent due of one farthing a ton should be levied upon all shipping entering our ports, by which means a considerable amount would be raised. It has been calculated by an officer of the Cunard service that the Liverpool proposal for a tonnage contribution would produce 60,000*l.* a year. Coasters would pay an annual contribution, in lieu of dues for every voyage. Mr. Lindsay expressed an opinion that even though the payment required from the seamen should, in point of fact, fall absolutely on the shipowners, they would be gainers thereby ; for the seaman would by this means be bound to the English flag, and less easily tempted to desertion by the higher wages in America. Wages from Liverpool for a voyage to Callao and back, in a sailing ship, average 60*s.* a month. The wages at Callao and the Colonial ports are almost double that amount. The

Liverpool Shipowners

Mr. Lindsay

result is that the seaman, having nothing to lose by desertion, is easily tempted to leave his ship, and the shipowner must engage a substitute for the voyage home, at double the amount originally agreed upon. Two months' wages must be paid—the proceeds of the advance note passing, as a matter of course, into the hands of the crimp. The administration of the fund must be in the hands of the State, and, with proper regulations, there should be no deficiency. But even if there were an occasional small deficit, it is to be remembered that under the Winding-up Act the State took possession of 200,000*l.*, and that the Government now receives an unclaimed surplus of 9,000*l.* a year from the wages and effects of deceased seamen, which are administered by the Board of Trade.

The State as administrator

Amount of pensions feasible

With the aid of these supplementary resources we have next to consider what amount of pension it will be possible to guarantee to the seamen without loss to the State. The calculations made by Mr. Finlayson for Mr. Labouchere in 1850 and for the Manning Commission in 1859 were based upon the Northampton tables, which gave a more unfavourable view of the expectations of human life than almost any other published experience, and which, it was ascertained by communication with the seamen's benefit societies, accurately represent the duration of the lives of mariners. Mr. Finlayson was asked by the Manning Commission to state what amount of pension, commencing at the age of 50, would be secured by an annual payment of 1*l.* from the age of 14. The amount, according to the Northampton tables, payable at the age of 50 would be 8*l.*, and at 55 12*l.* a year. In this calculation, however, no allowance was made for the secession of some of those who had been contributors to the fund. When, however, allowance

Calculations by Mr. Finlayson

was made for the probable number of seceders, which, in order to make a safe calculation, was taken at 3 per cent. per annum, it appeared that the pension, commencing at 50, would be increased to 11*l.* 5*s.*, and that it would be 18*l.* commencing at 55. The number of seceders was taken at the most moderate amount. In the Royal Navy desertion took place to the extent of 8 per cent. per annum of the whole number of men employed; and in the merchant service there were fewer obstacles in the way of desertion. Had Mr. Finlayson calculated upon a secession to the extent of 8 per cent., the amount of pension at the age of 50 would have been raised to at least 17*l.* a year. It will be observed with regret that no proposal has been made with respect to widows. The Commission on Pensions were of opinion that it would be impossible to require the payment of a contribution sufficient to provide for this object. They therefore proposed a voluntary benefit society for seamen's widows, to which the State should contribute 5,000*l.* a year.

Allowance for seceders

No proposal as to widows

I opened my statement by asserting the importance of a Seamen's Pension Fund on national grounds. I conclude by pointing out that it has always been associated by its warmest advocates with the organisation of the Naval Reserve. Mr. Lindsay was of opinion that, in lieu of the annual retainer, it would be far wiser to pass men for a year through the Navy, and, instead of giving the yearly fee and an imperfect training, as at present, to offer to the men enrolled in the Reserve the prospect of a pension of 20*l.* a year, to commence at the age of 50, provided they had in the meantime always followed the sea and held themselves in readiness to serve in the Navy. He calculated that, supposing a Reserve of 60,000 men were obtained, not more than 7,000 would live through their precarious and hazardous

Effect of a Pension Fund on Naval Reserve

Mr. Lindsay on the Reserve

career to claim their pension. Thus, for 140,000*l.* a year we should have, as he believed, a far more effective Reserve than we could command by a payment of 720,000*l.* a year under our present system. I appeal once more to the example of every maritime State, and to the repeated recommendations of the highest authorities in the country, as furnishing a conclusive argument in favour of the proposal I now make. Why should we longer hesitate to adopt a course which wise statesmanship and enlightened charity alike recommend? I beg, Sir, to move—

'That, in the opinion of the House, it is expedient to establish a compulsory, self-supporting Pension Fund for Seamen.'

VI

THE MERCHANT SHIPPING BILL

SPEECH IN THE HOUSE OF COMMONS, MONDAY, MARCH 27, 1876

Reports of the Royal Commission

As this amendment raises one of the two main questions referred to the Royal Commission, I wish to explain why I cannot vote with the hon. gentleman, the member for Derby, whose humane exertions on behalf of our seamen I appreciate highly. The Commission made two reports on this subject, in both of which they laid special stress on the fact that the Act of 1873 was of so new and tentative a character that it was impossible to pronounce a definite opinion as to the effect it would ultimately produce in preventing unseaworthy ships from being sent to sea. I advert to this point at the outset of my observations, because I, for one, should not have been prepared to sign the Report of the Commission unless I had anticipated that, under vigorous administration, the Act of 1873 would produce all the results that could be expected from the proposals of the hon. member for Derby. The evidence taken by the Commission was most conflicting, the witnesses generally inclining to those remedial measures with which their own personal experience made them most familiar. All the surveyors were in favour of Government surveys. All the officials connected with Lloyd's and other similar

Conflicting evidence

institutions in an administrative capacity were against surveys. For my own part, I entertain the conviction that the practical difficulty of a survey by the Government of unclassed ships has been much exaggerated. The number of vessels to be dealt with would be comparatively limited, and, if necessary, the assistance of Lloyd's surveyors could be obtained.

Difficulty of Government survey exaggerated

I am equally convinced, by our experience of the Act of 1873, that the power of complaint which has been given to the seamen is of no practical value. These are considerations which incline my judgment in favour of the proposals of the hon. member for Derby. On the other hand, I think it a most serious innovation for the Government to give certificates of seaworthiness, and thus to become directly responsible for the safety of any ship not good enough to class at Lloyd's. In practice, I believe that there would be little difference between the system proposed by Mr. Plimsoll and the vigorous supervision now carried out by the Government. The hon. member for Derby says that the Government should survey all unclassed ships. Practically the Board of Trade survey these ships under the existing regulations. Mr. Gray told the Commission that he knew that ships were sent to sea which ought not to be sent to sea; and he asked for power to break up an unseaworthy ship. He believed in a survey of suspicious cases, and in the punishment of men who disregarded the life of the sailor. What he wanted was legislation which would help them to bring home punishment to the offender. That was the language of Mr. Gray in 1873. And what did he say in 1874? He was asked by the Duke of Somerset the following question :—

Power of complaint by seamen of no value

Mr. Gray's opinion

Penal legislation

Views in 1873 and 1874

'We were told last year by Mr. Farrer, or by yourself, that you knew pretty well, throughout the country, where the bad and unseaworthy ships were, and that all you wanted was power in order to lay your hand upon them.' 'Yes,' he replied, 'I said so; and my experience in the working of the Act of 1873 has satisfied me that the Act, as it now stands, is sufficient for the purposes of the Board of Trade in preventing unseaworthy ships from being sent to sea. I should be sorry to see any further power given to the Board of Trade to interfere with the shipping of the country.'

The Act of 1873

If the Act of 1873 had been administered from the first with the vigour to which the Board stood pledged by the statements made on their behalf by Mr. Gray, I do not believe that the temporary Act passed last session, or the Bill we are now discussing, would have been introduced to Parliament. Both the Board of Trade and the hon. member for Derby agree that all unseaworthy ships should be stopped by the Government; but the Board of Trade object to give certificates, while the hon. member for Derby says that all ships which are not unseaworthy should be certificated.

Government certificates, objection to

For the security of the shipowner, I should prefer the system of Government certificates. For the security of life, I should object to them. Unclassed ships are of two kinds. They are either in such high repute with shipowners that they can be insured at the most favourable rates; or they belong to poor men, who cannot afford, or to negligent or unscrupulous people, who are unwilling, to pay the cost of proper repairs. The powers of the Board of Trade, under the Act of 1873, after too long a delay in the commencement of operations, are now brought to bear on these inferior ships. The result must be that all vessels will be kept in sufficient repair to class at Lloyd's, or else they will be broken up.

If these anticipations are fulfilled, would it not be

Shipowners' responsibility

better that shipowners should protect themselves by classing their ships, rather than seek to obtain a Government certificate, which will relieve them of further responsibility? I object to relieve a shipowner of the highest standing from responsibility; but I object still more to relieve from responsibility struggling or unscrupulous people, who, instead of making an effort to keep their ships seaworthy, will use all their cunning to hide defects, and to obtain certificates at the smallest possible expense. If such a system as this be introduced, the seaworthiness of the inferior ships will depend entirely on the vigilance of the surveyors, and we have no reason to suppose they will not sometimes make a mistake. Surveyors are not infallible. A few ships are now lost from the carelessness of their owners. Under the proposed rules a few ships will be lost from the carelessness of surveyors. But whereas now, when an uncertified ship is lost, the shipowner is responsible, he will be held blameless in every case of disaster to a ship certified by the Government.

Should not rest with surveyors

Argument in favour of inspection by Mr. Reed

The hon. member for Pembroke (Mr. E. J. Reed) has adduced the Government inspection of railways as an argument in favour of the proposal of the hon. member for Derby. My railway experience has taught me a very different lesson. If we had trusted to minute Government inspection, rather than to the effect of liability to pay heavy damages in case of accident, the safety of the travelling public would not have been so well secured as under the system actually adopted. I entertain no sanguine belief in the possibility of increasing the safety of life at sea by further legislation. We do not want legislation so much as good administration of the laws we have lately passed, and under which such ample powers have been already entrusted to the

No more legislation wanted

Government. I was greatly impressed by the strong opinion on this subject expressed to the Royal Commission by Mr. Burns, the leading proprietor in the Cunard line. He told us that, in his opinion, there had been too much interference of late by Act of Parliament, and that that interference had had no effect in diminishing loss of life at sea. Such an opinion deserves the respectful attention of this House, coming as it does from the owner of a fleet of steamers which have made nearly 3,000 passages across the Atlantic, and whose happy fortune it has been never to lose a life entrusted to his care.

Mr. Burns against Government interference

In conclusion, I desire to express my conviction that the general condition of our shipping does great honour to this country. The success of our shipowners, in competition with the whole world, affords the best proof of the quality of their ships. And spending, as I do, no inconsiderable part of my life afloat, and comparing the shipping of the present day with my recollections of twenty years ago, I see a progressive development of speed, power and safety which I should hesitate to interrupt by novel legislation, which, however laudable in intention, I believe to be framed on a total misconception of the proper functions of a Government department.

Tribute to shipowners

VII

SEAMEN'S DIETARY

SPEECH IN THE HOUSE OF COMMONS, THURSDAY, MAY 4, 1876

MR. BRASSEY said :—As a general desire had been expressed that all legislation relating to seamen should be postponed until the next session, it was not his intention to move the clause on the subject of dietary of which he had given notice. He would, therefore, take advantage of the motion of the hon. member for Derby to make a short statement on the subject. He must, in the first place, complain of the delay in the publication of a valuable report, which the Board of Trade had lately received from Dr. Leech, who had been employed by the Government to inquire into some recent and painful cases of scurvy. Being unable to refer to the latest information which had been collected, he must avail himself of the report, published in 1867, by Admiral Ryder, as chairman of the Committee of the Society for Improving the Condition of Merchant Seamen. We had another important official report, made in 1872 by the surgeon to the Seamen's Hospital at Callao. Scurvy had been for years unknown in the Navy. It was a disease which could be effectually prevented, and great progress had been made in that direction under recent legislation. In the last report from the 'Dreadnought' Hospital, it was stated that, in 1855,

Dr. Leech's Report

Admiral Ryder's Committee

189 cases of scurvy were admitted, and that 601 were treated from 1856 to 1860 inclusive. During the past eight years only 219 cases had been admitted. Unhappily there had been of late a melancholy increase in scurvy in British ships. He would now turn to the reports by Dr. Roe, surgeon to the British Seamen's Hospital at Callao, which had been prepared in reply to the circular letter of inquiry as to the condition of merchant seamen, issued by the Board of Trade in 1872. No medical man had a larger personal experience than Dr. Roe. In the four years from 1865 to 1869, 251 cases of scurvy were received from 57 vessels, 13 ships sending 9 cases and upwards. The inquiries at Callao had established the inadequacy of the ordinary diet on board ship to maintain the health of the seamen, even when supplemented by the anti-scorbutics enforced by the Merchant Shipping Act of 1867. Dr. Roe said the salt beef and pork constituted the main articles of a seaman's food, and were supposed to represent an amount of nourishment which they were far from containing. Scurvy was essentially starvation. He recommended, as the most powerful anti-scorbutics, fresh juicy vegetables, such as potatoes. The cost of such an addition to the seaman's dietary was insignificant. He had examined the dietary scale adopted by Mr. Beageley, of Liverpool, and by Mr. Wigram, of London, and he found that potatoes were regularly issued. He was not anxious for legislation in the details of the shipowner's business. Admiral Ryder had suggested that the Board of Trade should not allow a scale of rations to be printed with fixed quantities; but that they should insist that, in every scale of dietary, headings should be inserted, including those articles of food which experience had proved to be the most effective anti-scorbutics. He

Scurvy cases in 'Dreadnought' Hospital

Dr. Roe and Seamen's Hospital at Callao

Seamen's food insufficient

Anti-scorbutics required

Admiral Ryder's suggestions

ventured to hope that this suggestion would be adopted, and that an intimation would be made, on the part of the Board of Trade, that a shipowner would be held responsible if it were proved, before any future court of inquiry into cases of scurvy, that he had failed to supply the necessary amount of preserved vegetables, in addition to the salt meat and lime-juice already insisted upon. He might mention that the art of cooking was probably at its very lowest ebb in the merchant service, and that some of our Consuls had recommended that none but certificated men should be allowed to be shipped as cooks. Certain recent cases of scurvy had occurred on board ships in which the supply of water had been proved to be bad. All large ships in the foreign trade should be supplied, like the ships of the Royal Navy, with a condensing apparatus. He did not desire to encumber the Bill with irrelevant matter, but he knew that an opportunity might not soon recur for securing to the seaman improvements in his dietary which, though they might appear of small consequence to the committee, were of almost vital importance to men who might have to spend 150 dreary days consecutively at sea.

Inefficient cooking

Supply of fresh water

VIII

OFFICERS OF THE MERCHANT SERVICE

SPEECH IN THE HOUSE OF COMMONS, MAY 16, 1876

Mr. Brassey rose to call attention to the recent Consular reports relating to the officers of the merchant service, and the falling off in the British trade in the Baltic. He said that while the causes of shipwreck had been frequently debated this session, the efficiency of the officers of the merchant service had never been called in question. He gladly acknowledged that the examination for masters and mates, conducted under the Board of Trade, had produced excellent results; but it was obvious from Consular reports that the condition of the merchant service as to officers still left much to be desired. He would insist chiefly on the defects of the inferior class of ship masters. He desired, however, not to be misunderstood as intending to draw a general indictment against our merchant officers. The state of the profession might still be accurately described in the language of Lord Ellenborough, in the report of the Committee on Pensions:—

Board of Trade examinations

'Masters of merchant vessels differ widely in their qualifications and character, and are of many various grades in society. While some may be little superior to seamen, there are others not only distinguished by the

Lord Ellenborough on masters of the merchant service highest acquirements in the practice and science of navigation, but as gentlemen of the best education and manners.'

A higher standard of professional knowledge necessary

He wished to induce the Government to make further efforts to raise the standard of professional knowledge among the merchant officers, and in order to show how necessary it was that something should be done he referred first to the report of the Commission on Unseaworthy Ships, wherein it was stated that while from 1856 to 1872 inclusive only 60 ships were known to have been lost from defects in the vessels, 711 were lost from neglect and bad navigation. He next referred to the replies of Her Majesty's Consuls to the letter of the hon. member for Reading, calling for their opinion as to the condition of the merchant service. Similar inquiries had been made in 1843 and 1847, and a comparison of the earlier reports with those of 1872 showed a marked improvement. As a rule, steamers and first-class sailing ships were well commanded, though it was proved there was a necessity for improvement in the officers of inferior ships. He quoted from the report of Mr. Mark, British Consul at Marseilles, who stated that 'England is not fairly represented by the men who command her ships on the ocean. The grossest ignorance is seen, and drunkenness largely prevails among them.' Sir J. R. Crowe, our Consul-General at Christiania, said :—

British Consul at Marseilles

Sir J. R. Crowe on Norwegian masters

'In cases of competition between British and Norwegian ships, when the master of the latter accepts the same rate of freight as his British competitor, he will generally be preferred, as the British sailing ships visiting Norway are commanded by third and fourth class masters, who frequently have neither education nor sobriety to recommend them.'

Mr. Ward, Vice-Consul at Memel, and Mr. Doyle, Consul at Pernambuco, made similar reports. Mr. Gould, our Secretary of Legation at Stockholm, reporting on the British shipping trade with the Baltic, said :—

Tonnage in trade with Sweden. Small percentage British.

'In 1872 1,714,000 tons of shipping were employed in the direct trade between Sweden and Great Britain. Only 25 per cent. of this tonnage was British.'

Defective education of English masters

Our shipmasters were totally ignorant of the Swedish language, while the Swedish and Norwegian masters were as much at home in England as in their own country. It was not difficult to show that in British merchant vessels many officers were to be found who were badly educated. It was not equally easy to provide a legislative remedy for the evils which had been described. As a rule, only the ill-paid were ill-conducted ; and it was impracticable for the Legislature to regulate the private bargains between needy shipmasters and parsimonious shipowners. This statement would be incomplete without some reference to this aspect of the question. Mr. Mark, our Consul at Marseilles, said that British shipowners should give better remuneration to their captains and oblige them to hold a share in their vessels. Captain Toynbee pointed out that there were masters of ships of 800 tons whose salaries were only 10*l*. a month. The institutions set up for the relief of merchant seamen were chiefly used for the benefit of the officers. Of the 1,200 orphans who had been inmates of the Merchant Seamen's Orphan Asylum at Snaresbrook, the children of captains numbered 637 ; of mates, 230 ; and of seamen, only 77. While he admitted that the question of remuneration must be settled by the shipowners, he hoped that an expression of opinion in that House might tend to establish a more just view of the reward which was due to the masters of merchant ships responsible for the safety

Insufficient salaries of masters

of valuable cargoes, and sometimes hundreds of human lives.

A greater knowledge of languages desirable

Turning to professional education, the examinations already established had done good, and the Board of Trade would do well to proceed further in the same direction. It was suggested by Mr. Gould that voluntary examinations should be held in modern languages and the elements of a commercial education. An honorary certificate might be given for proficiency in the new subjects, as it was already granted for mathematics. In the merchant service a knowledge of languages was at least as essential as a high standard of mathematical attainments. You might make a good landfall without trigonometry; you could not trade with people whose language you did not understand. In adopting these suggestions he might say they would be but following the long-established regulations of the principal maritime nations. In Norway and Sweden masters passed a general examination in shipping affairs, in the customs and navigation laws, and in the foreign exchanges. In Russia and Prussia some knowledge of French and English was required. In France a professor, paid by the Government, resided at the principal ports to give instruction in navigation free of charge, and he claimed the example of France as an argument in support of his second proposal.

Systems abroad

Sir Charles Napier on Reserve of officers

In the debate on the manning of the Navy in 1860 Sir Charles Napier said truly, 'Suppose you have obtained your Naval Reserve. Where would you get officers to command them? You would find it absolutely necessary to come to the merchant service.' He would not enter into the question of the organisation of the Naval Reserve, but would urge the importance of making the University at Greenwich a connecting link between the Royal Navy and the mercantile marine. Not until its benefits were extended to officers of the merchant service could the College claim to be regarded as a truly national institution. The lectures were already accessible to merchant officers, but that was not enough. The majority of masters and mates were too poor to be able to give up a year to study. He would therefore propose that a few studentships for officers of the Reserve should be established at Greenwich. Students should be admitted to the College for twelve months free of charge, and should receive a sum of not less than 60*l.* a year. The gradual introduction into the merchant service of officers of higher attainments who had had associations with the Royal Navy must be a mutual benefit to the two services, and therefore a public advantage. We might look to the Greenwich students as men well qualified to serve in the Navy in time of war, and expect that their example and influence in time of peace would tend to raise the general tone of their profession. He begged to move—'That it is expedient that voluntary examinations should be held under the Board of Trade in modern languages and commercial law, and that further inducements should be given to merchant officers to study at the Naval University at Greenwich.'

Greenwich College should be open to officers of the merchant service

IX

THE SEA AS A CALLING

ADDRESS TO THE CADETS OF THE THAMES NAUTICAL TRAINING COLLEGE 'WORCESTER,' AT THE DISTRIBUTION OF PRIZES, FRIDAY, JUNE 22, 1877

I EXPRESS a sentiment deeply felt by all the company on this platform when I say that we experience great satisfaction in being present on such an occasion as this. No character can be more attractive than that of a brave, true-hearted British seaman; and no institution can so largely command the very best sympathies of the British nation as that established on board the 'Worcester,' the object of which is to train young gentlemen for a naval career. It is not necessary, I am glad to say, to have made a distinguished career in the Navy, like many gallant officers whom I now see around me, nor is it necessary to have been in the merchant service, in order to understand that the object of this Nautical Training College is a most desirable one. One need be no more than an amateur in order to appreciate the difficulties which seamen have to encounter. And for my own part, having just returned from an extensive sea voyage, I cannot but feel the greatest sympathy with you young gentlemen when I think of the difficulties you will have to encounter. I return from a long voyage more im-

Difficulties of a sea life

pressed than ever by a sense of the importance and the usefulness of the nautical profession. It is a life of noble enterprise, and well fitted to strengthen true dignity of character. An officer commanding a ship comes perpetually into contact with the grandest forces of nature, and he learns to place his dependence upon that Almighty Power by whom those forces are directed, while at the same time he endeavours, to the utmost of his ability, by professional skill and fertility of resource, so to steer his course that these forces shall not overwhelm him.

Usefulness of a nautical profession

Young gentlemen, if your profession is one of danger and difficulty, it is certain that on this account it demands special training. And, so far as I understand the state of the case, the opportunities you possess here give the kind of training that you will find most serviceable when you enter upon a seaman's career. In my opinion, therefore, for the good of the merchant service, and for the country generally, it is most advantageous that such institutions as the 'Conway' and the 'Worcester' should have been created.

Special training required

I sincerely hope, Cadets of the 'Worcester,' you will rightly appreciate the opportunities afforded to you while on board this ship. There are many considerations which ought to convince you of the value of the two years' training you receive here. In recent years we have witnessed a remarkable revolution in the merchant service. The very extensive introduction of steam power, while it has facilitated our commercial intercourse, has nevertheless tended to lessen the opportunities of professional instruction. It is impossible to train a naval officer on board a full-powered steamship in the same way as on a vessel dependent entirely on the winds for locomotion. You must remember that in

Advantages of course in 'Worcester'

the keen competition of the merchant service no more hands can be employed than are absolutely necessary to work the ship. The consequence is that there cannot be provided a sufficient number of instructors whose special duty it shall be to teach young officers the details of their profession. Hence it is of immense importance and advantage to have been on board a ship like this to learn your work under the superintendence of those well qualified to teach you every part of it. There are many things which can be taught and learnt in the 'Worcester' which you will have little or no opportunity to learn when you go to sea. There is, for example, the use of the lead. A vessel constantly employed in deep waters is one in which the use of the lead is not resorted to; and here you can have daily practice in its use. Again, there is practice in boating; and that cannot be learnt in deep seas. Here, however, you may learn that art, which is invaluable to men engaged in your profession. Deep-water seamen are out of their element in small boats, and therefore we frequently hear of disastrous accidents. I venture to hope that you who have had your training here will be safe in squally weather and avoid the accidents which have sometimes proved fatal to others.

Subjects acquired in training ships

Value of swimming

I was pleased to distribute the prizes for swimming. It is only on board a ship like this that you can learn the art; and when we reflect how many lives are annually sacrificed because people have been unable to swim, the instruction given in this subject is exceedingly valuable.

The 'Worcester' self-supporting

There is another feature in this institution which must tend very much to recommend it to any representative of a tax-paying public. I refer to its being a self-supporting institution. Let me here observe that the more I have studied the merchant service, both as regards ships and seamen, the more convinced I am that it is not by 'Minute Resolutions,' not by crude legislation, not by the interposition of the Board of Trade, of Parliament or the Admiralty, but by self-organisation that we shall be able to improve the merchant service. It is, therefore, in this connection that I wish to recommend the 'Worcester' to the approval of the British public.

How to employ leisure at sea

I have spoken of the institution as very valuable for the purpose of teaching you seamanship and the professional part of your duty. But there is yet another aspect in which I should like you to look at your future profession. I am reminded by my voyage that the life of a sailor is a solitary life. Now, the way to prevent such a life having a deteriorating effect upon character is to be prepared to fill up intervals of leisure in a satisfactory manner. The culture which you receive here, not only in seamanship but in science and literature, will enable you wisely to fill up these intervals on the broad ocean, in a manner satisfactory.to yourself and to those around you. In a life at sea, physical subjects and astronomical subjects, the study of marine architecture and other things will be found exceedingly useful, and these studies can only be followed to any practical end by those who by previous reading have prepared to make their observations at sea.

Influence of example of officers on crew

Let me remind you of another point; the crew of a merchant vessel on a long voyage are by the circumstances of their occupation deprived of some of the best influences of religion and civilisation. It is for the officers of the ship to supply influences which are of unquestionable value, and which can only be derived from their personal example. If it would not tire you

Mr. Lindsay's career

I should like to put before you a few lines written by Mr. Lindsay, who is one of those men whose names are an honour to the seagoing life of England, a man who began life as a cabin boy, but who worked his way up to become the owner of many a good ship. Mr. Lindsay's words are very valuable. He was cut off, so to speak, by illness from his Parliamentary career, but he has published a series of letters that do him great honour. He says :—'On the character of the master, and the course of conduct he pursues, depend in a great measure the character and success of the ship and the conduct of the other officers and of the men. He has to exert an influence both direct and indirect, and it may be an influence of much good or of much evil. If he is brave, true, and temperate, some of these good qualities will be seen among his officers and men which would have been otherwise absent had the captain been a man of indifferent character.' When you go to sea remember this advice. Your moral responsibility extends far beyond your own ship. You are constantly placed in the very van of civilisation, visiting distant and comparatively unknown shores, where you will be regarded as representatives for the time of the character and honour of England. When you are placed in such circumstances of responsibility, may your conduct be worthy of your responsibilities ! If your conduct is worthy and noble, then you will enhance the dignity and glory of the country. If it is the reverse of this, you may bring a stain upon the honour of our dear old England.

His remarks on the influence of the master

I have referred to your training here, to your connection with the merchant service and its responsibilities ; and let me now refer to the recent encouraging evidences of the solicitude on your behalf which is felt

Action of Admiralty in appointments to Naval Reserve

by the Government and the country. It is most gratifying to find that the Admiralty have recognised the intimate dependence between the Royal Navy and the merchant service by appointing as midshipmen to the Royal Naval Reserve ten cadets from the 'Worcester' each year. As you have heard from the Hon. Secretary, four of the young gentlemen of this ship have been appointed to the Hooghly Pilot Service. I may further refer to the appointment of H.R.H. the Prince of Wales as captain in the Naval Reserve as a most gratifying compliment to every officer connected with the merchant service. I take this to be a most important step, and one which will tend to make the Royal Naval Reserve more popular than ever. I trust this step will be followed up by a yet larger measure of encouragement. I cannot doubt that some scheme might be framed by which, in consideration of special services rendered to the Royal Naval Reserve, the rank of Commander might be conferred on officers in the merchant service.

H.R.H. the Prince of Wales an officer in the Naval Reserve

Consular appointments

There are other appointments in the Government gift that I should like to see filled by well qualified officers. There are, for example, hundreds of Consular appointments, which so far as I know are tolerably well paid. The duties of the Consuls are chiefly connected with the merchant service, and I see no reason why such appointments should not be held by merchant officers. And I may say the same of the appointments of the Board of Trade. I wish most of these good berths were given to seamen. Too often when there is a good thing going a landsman seems to intrude himself, to the disadvantage of those who have served at sea.

Lastly, as a means of raising the character of the merchant service and its officers, I would hope that the

A central professional institution required for merchant service

day is not far distant when the profession will in a collective capacity have an institution similar to those professional institutions which have been established for many years in connection with other professions. Whether I speak of architects, mechanical engineers, or any other profession, I find that there is a central professional institution where members can be received, where professional subjects can be discussed, and the profession to which they belong be greatly advanced. It would be a great thing if we could have an institution of this kind in connection with the merchant service. I desire to express, not only for myself, but for Mrs. Brassey and all on this platform, our great satisfaction in being able to take part in these proceedings. We rejoice to believe that this ship is conducted in a most satisfactory manner. It was with the greatest pleasure we observed the enthusiasm manifested on the mere mention of the name of Captain Smith, the Commander of the 'Worcester.' I regard that enthusiasm as proof of Captain Smith's great and deserved popularity. I have reason to know that the Committee very highly appreciate the gallant Captain's services, and the high tone of character with which he discharges his most responsible duties. Now, Cadets, let me say from my heart how delighted I am to be with you to-day, and I trust your future career in a most noble profession will be both honourable and successful.

Popularity of Commander of 'Worcester'

X

A SEA CAREER

ADDRESS TO THE CADETS OF THE TRAINING SHIP 'CONWAY,' AT THE DISTRIBUTION OF PRIZES, JUNE 24, 1880

IT now becomes my duty to offer a few observations on the occasion which has brought us together. And, first of all, let me thank the committee of management of the 'Conway' for inviting me to distribute the prizes to the successful cadets. The admirable work which has been done on board the 'Conway' well merits the sanction and the encouragement of the Admiralty, of which I am the humble representative. To me personally this scene is one of the deepest interest. It was on the waters of the Mersey that I first began in my early boyhood to indulge that love for sailors, shipping, and the sea which has never since left me. It needs no personal associations with the sea to realise the deep interest which attaches to an occasion such as that which has brought us together. The greatness, and, indeed, the very existence of our country rests upon her maritime enterprise. It was thought that steam would be a great leveller; that the peculiar seamanlike qualities of our race would be less felt when a mechanical motive power was substituted for the old-fashioned seamanship as it was practised when all depended on the winds. All such apprehensions, how-

Personal interest in the Mersey

ever, have proved to be groundless. The tonnage under the British flag has grown with a marvellous and ceaseless growth, until it now exceeds in the aggregate the united tonnage of all the other merchant navies of the world. Our steam shipping is absolutely unrivalled. To what causes shall we attribute our success? It is due in part to the geographical position of this country, in part to the material resources of coal and iron we possess, in part to the skill of our shipbuilders, partly to the commercial ability of our shipowners. All these resources would be of little avail unless the country could furnish, as it does, a band of brave, true-hearted, and skilful officers to command the goodly fleets that we have created. The young gentlemen who have to-day received prizes, and their comrades who, though less successful, will, I trust, look forward with buoyant hope to the future, are about to join a profession to whose services the whole nation owes a large debt of gratitude. Let us all remember that, while a sea life presents irresistible attractions to adventurous natures, it is also a life of privation and hardship. It means long separations from home; it cannot be free from danger. There are trying vicissitudes of climate, and exhausting watchfulness must be maintained as night succeeds to night. Let us, I say, be thankful that it has pleased God to encourage some gallant spirits to make choice of a calling which exposes those who follow it to such experiences. Let us wish well to the work undertaken on board the 'Conway,' the work of preparation for the arduous profession of a sea officer in the mercantile marine.

Increase of British tonnage

Hardships of a sea life

The training received on board the 'Conway' is important primarily for the safe conduct of vessels; but it is not less important in a moral point of view that our young sea officers should receive a thoroughly sound and good education. No class of men have more direct means of influencing those around them than the officers who command our merchant ships.

Good training necessary

The best mode of training our seamen is a subject which has received the most anxious consideration both at the Admiralty and in the mercantile marine in recent years. The Navy has sustained an irreparable misfortune in the loss, within little more than twelve months, of two training ships with their crews of 600 fine young seamen. Whatever may be the future arrangements for the training of the seamen in the Royal Navy, certain it is that the former boards of the Admiralty were acting in conformity with the advice of the finest seamen of our day, both in the Royal Navy and in the mercantile marine, in sending the young seamen to sea in sailing vessels for training purposes. Every youth who leaves the 'Conway' should join a sailing ship. The 'Eurydice' was lost, among other reasons, because her ports were open when it would have been more prudent to have kept them closed. As to the causes of the loss of the 'Atalanta' we cannot presume to offer an opinion. We know that the ship encountered weather of fearful severity, and every seaman knows the tremendous interval which separates ordinary bad weather at sea from those violent tempests which may be encountered only once or twice in the lifetime of the most experienced voyagers. It will be our duty to take every precaution which science and experience can suggest; but the naval administration of the country cannot suffer themselves to be deterred by the apprehension of danger from sending our young seamen afloat to learn the duties of their calling where alone they can be acquired—that is to say, in the school of practical experience, and in

Advantage of training in sailing ships

'Eurydice and 'Atalanta

Practical experience essential

perpetual contact with the winds and the waves. The great commanders of past times attained to the highest degree of excellence as seamen and naval tacticians by incessant cruising. When Nelson landed in Gibraltar, in June, 1805, on his return from the famous pursuit of Villeneuve from the Mediterranean to the West Indies, and from the West Indies back to the shores of Europe, he made the following entry in his diary:—'I went on shore to-day for the first time since June, 1803, and from having my foot out of the "Victory" two years, wanting ten days.' In fifty years' service, Lord Collingwood was actively employed forty-four years, and was once twenty-three months at sea without dropping anchor. It was by their constant practice at sea, stimulated, no doubt, by the perpetual anticipation of battle, that the illustrious officers of that great era in our Navy became such incomparable seamen. Nothing could be more fatal to the future of the British Navy than to keep our officers and men for long years in the shelter of harbours and snug roadsteads, and to allow them to acquire their first experiences of the perils and hardships of the sea when engaged in active service against the enemy.

Time spent by Nelson and Collingwood at sea

Connection between Royal Navy and mercantile marine

An occasion like the present naturally leads us to consider the intimate dependence of the Royal Navy on the mercantile marine. With me it has always seemed to be a great and cardinal principle of naval administration that we should regard all the maritime resources of the country as available for the defence of our shores and our commerce. I do not wish to use language which might excite alarm, but I am bound to say that I should not be altogether satisfied with the recent progress in naval construction in our dockyards unless I looked behind the Royal Navy to the resources the country possesses in its mercantile marine and private shipbuilding yards. Having considered the question of a reserve of ships, we are naturally led to the kindred topic of our reserves of men. The Naval Reserve has now been established long enough to test its value. The report of Admiral Phillimore, on resigning his command as Admiral Superintendent of the reserves in November last, is highly satisfactory. The numbers have been maintained for some years past at 17,000. The second class could be increased without difficulty from the north of Scotland and other places in which the great sea fisheries are carried on, and the first class reserve is spoken of by Admiral Phillimore as composed of a very fine body of seamen, the leading and best men in our merchant service. Probably no incident could have done more to encourage the Naval Reserve than the appointment of the Duke of Edinburgh to the command. The Admiralty have lately taken a wise step by giving cadetships in the Reserve to the young gentlemen educated in the 'Conway' and 'Worcester.' The newest element in the Naval Reserve—the Royal Naval Artillery Volunteers—has been spoken of in the warmest terms both by Sir Walter Tarleton and Admiral Phillimore. The present strength is 1,002; the Liverpool brigade, with 502 members, to which I have recently had the honour of being appointed as honorary commander, being the strongest brigade. I regard the Royal Naval Artillery Volunteer movement as the connecting link between the Navy and the civil population. In the ordinary duties of the service the Navy is necessarily kept apart from the main stream of the national life. The Navy wants the sympathy of the country. It gives us in return a share in its traditions and high examples of self-sacrifice, patriotism, and devotion, which we shall

The Naval Reserve
Numbers and quality

Royal Naval Artillery Volunteers.
A connecting link with civil population and Navy

do well to follow. Read the introduction to Alston's 'Seamanship'; read Southey's 'Life of Nelson'; read the Memoirs of Collingwood and Goodenough. Remember that some of the greatest deeds of naval daring were done by members of your own branch of the naval profession—by Raleigh and Drake—in vessels poor and contemptible indeed in comparison with the powerful ships of the present day. In bidding farewell to the cadets on board the 'Conway,' I cannot give them any better counsel, I can desire for them no richer blessing, than that they should be able to imitate in their career the courage and the constancy of these great sea officers of our past history.

Emulate deeds of great commanders

XI

SHIP INSURANCES AND LOSS OF LIFE AT SEA

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THE speeches delivered by Mr. Chamberlain, and the administrative measures which he has taken as President of the Board of Trade, have once more aroused the public interest in the anxious question of the preservation of the lives of our seamen in the mercantile marine. It is a melancholy fact that the philanthropic efforts of Mr. Plimsoll, and the legislation which followed, have hitherto proved wholly ineffectual. The average annual loss among British seamen in the five years 1877 to 1881, was 1,692 lives. That number increased in 1882 to 3,118, and it had reached 3,500 at the date of the latest returns. Much of this loss is preventible. Careless shipmasters and mates are responsible for many collisions and strandings ; and hitherto the punishment awarded by the temporary suspension of certificates has erred on the side of leniency. For the reckless overloading of ships, for undermanning, in many cases to a dangerous degree, and for negligence in regard to repairs, shipowners and underwriters are mainly responsible.

Loss of life at sea

The Royal Commission on Unseaworthy Ships hesi-

Difficulties of Board of Trade

tated to recommend a universal inspection of ships by the Government. They were unwilling to relieve the shipowner of responsibility; and they thought it would be more effectual to give the Board of Trade power to detain ships, and to institute criminal prosecutions. In practice, it is most difficult to bring home a direct personal responsibility to the shipowner. Even when the charge has been proved, it is said, 'The Board of Trade were authorised to detain the ship; and why did they not exercise the powers with which they have been invested?' Where, again, the Board of Trade has detained vessels on the ground that they were overladen, the shipowner has complained that he ought to have been informed beforehand of the limitations of load which the Board of Trade was determined to enforce.

Committee on load lines

Undeterred by the acknowledged difficulty of the task, the Board of Trade, assisted by a most able departmental committee, with Sir Edward Reed as chairman, is engaged in the preparation of rules for the determination of load lines; and a proposal has been made to enforce more effectually the personal responsibility of shipowners, by the establishment in the principal seaports of courts of first instance, in the constitution of which the interests and the experience of the shipowners and the controlling and superintending authority of the Board of Trade shall be jointly represented.

Precluded from criticism

As a subordinate member of the Government in the department of the Admiralty, I am precluded, even if I were disposed to do so, from offering any public criticisms on the policy of the Board of Trade; but my present official position is not incompatible with the limited purpose of the present paper. At a time when the country is full of anxiety for the lives of our seamen, and information is eagerly sought on the subject, I feel it my duty as a member of the Commission on Unseaworthy Ships, to whom the most recent inquiry on the preservation of life at sea was entrusted, to bring together in a connected form the valuable evidence presented to us, together with those portions of the Report of the Commission which deal with marine insurance.

Complexity of law on marine insurance

The law on this subject presents problems of extreme intricacy, and it affects commercial interests of enormous magnitude. In a large trading community marine insurance is a necessity, and the very anomalies which a layman is disposed to criticise most severely have grown up with the express sanction of our legal tribunals, and indeed had their origin in the decisions of judges of great eminence and authority. It would be rash and imprudent in the highest degree on the part of a private individual to press for changes in the law as it is at the present laid down, without a deliberate and exhaustive examination of the whole subject. The necessity for such a revision will have been sufficiently established if it can be shown that the facility for insuring to the full, and sometimes to an exaggerated value, leads to carelessness and recklessness in the management of shipping, and is therefore a primary cause of the deplorable loss of life at sea.

Duke of Somerset's Commission

The witnesses on the subject of marine insurance, who appeared before the Duke of Somerset's Commission, comprised barristers and solicitors largely engaged on commercial cases, and officials of Lloyd's and the Board of Trade. They were selected for their special knowledge, their high character, and freedom from bias and self-interest.

View of Sir Thomas Farrer

Sir Thomas Farrer being asked whether, in his opinion, our system of insurance had any effect upon the safety or danger of property and lives at sea, he replied that 'it was obvious that it must have the greatest possible effect. It was quite clear that even if you put the shipowner in as good a position by insurance in case of loss as he would occupy if the voyage were successfully completed, you to that extent diminished the motives which otherwise would actuate him in taking care that the vessel was seaworthy. If insurance went beyond that, and gave considerable profit in case of loss, which he would not have had if the voyage had been successfully completed, you gave a motive, he would not say for fraud, for he believed cases of fraud to be rare, but you gave a motive for great recklessness.'

Other testimony

Mr. Butt, who has since been elevated to the Bench; Mr. Hollams, the eminent commercial solicitor; Mr. Walton, another eminent London solicitor; Mr. Squarey, solicitor to the Mersey Docks and Harbour Board, and Mr. Lamport, gave similar testimony.

Mr. McIver on over-insurance

Speaking in the House of Commons in the debate on marine insurance in 1875, Mr. McIver said that over-insurance in regard to cargo happened to be the rule rather than the exception. It was the custom of the trade to insure a ten per cent. profit on bulky cargoes of coals, grain, or iron. Vessels so laden were those which most frequently went to the bottom. The merchant, broker, or charterer, were all insured, and their profits were secured, provided only the vessel was lost. It was not a question of only one, but frequently of two profits, because if one cargo was lost there was another to replace it. Nobody meant the vessel to be lost, but practically it was not the interest of those persons to see that the vessel was not overladen. It would certainly occur to them to do so if the loss of the vessel meant a loss of money.

The valued policy

Having referred to the opinions expressed by competent authorities as to the effect of insurance in increasing marine disaster, we may proceed to consider the various policies of marine insurance. Let us take first the case of the valued policy. In a valued policy the agreed value of the subject insured is expressed on the face of the policy. It might reasonably have been supposed that where the value expressed in the policy exceeds the real value of the property insured, the courts would have refused to sanction the overvaluation. Such, however, is not the doctrine of our law. The underwriter is not allowed to set aside the value, as stated in the valued policy, except upon plea and proof of fraud.

Memorandum by Mr. Justice Willes

It may be presumed that the decisions of the courts had their origin, as explained by Mr. Justice Willes in his memorandum written in the year 1867, first in the desire to avoid the inconvenience of protracted inquiries as to value, which, in many cases of total loss, would be difficult of proof. Secondly, it was thought expedient to allow the assured to insure to the full extent of his interest, though exceeding what he could get for the ship if put up to sale, because in certain cases expenses may have been incurred with reference to a special use of the ship, as in the case of a ship fitted like the 'Great Eastern' or the 'Faraday' for laying an electric cable.

When we turn from the commercial aspects of the question to consider the effect of these insurances in relation to the loss of life at sea, we must admit, with Mr. Justice Willes, that the system of valued policies, whatever its conveniences, does encourage fraudulently disposed people to put high values on comparatively worthless vessels, and gives them an interest in the loss of their property.

The open policy

We may now pass on to consider the open policy, or that in which the value is not fixed either for ship, freight, or goods. According to the law as it is now laid down, the value of goods is the invoiced price, together with the charges for loading and insurance. The value of a ship is held to be the sum she is worth to her owner at the port where the voyage commences, including outfit and premium and costs of insurance. The amount recoverable on an open policy on freight is the gross freight paid by the shipper.

Example of over-insurance

The effect of the present rules can be most easily understood by an example quoted by Sir John Lubbock in a speech delivered in the House of Commons in 1875. A vessel sailed from Quebec for Liverpool. The freight, as per charter party, amounted to 3,500*l.*, but was insured for 6,000*l.* The ship was lost in the river St. Lawrence. If the voyage had been completed successfully the net receipt of the owner would not have exceeded 3,500*l.* By the loss of the ship he realised 6,000*l.*

It has been suggested, as a remedy for this strange inconsistency of the law, that the underwriter should be entitled to deduct from the amount payable to the shipowner on an open policy on the freight all expenses actually saved by the loss of the ship.

The voyage policy

We may now turn to the voyage policy, or that in which the limits of the voyage are designated in the policy by specifying a given place at which it is to begin, and another at which it is to end. The anomalous state of the law in its relation to voyage policies will be most readily shown by quoting from the observations of Mr. Harper. 'In the case of a voyage policy the law steps in again with its eternal vigilance on the owner's behalf. At the inception of the risk the ship must be seaworthy.

Observations of Mr. Harper

There is an implied warranty, as it is called, of seaworthiness. But it has been held that the voyage out and the voyage home are one voyage ; and it frequently happens, and it has happened to my knowledge, that a ship has gone out from one port to another, say from London to Shanghai, has been damaged on the way, has delivered her cargo, and taken in a cargo for the voyage home, had not been repaired at Shanghai, and had left in so bad a condition that there was every probability of her foundering. She had foundered, and yet, as there was no warranty of seaworthiness for the voyage from Shanghai, the assured had recovered the whole of his money from the underwriter.'

The time policy

The last policy to which allusion is necessary is the time policy, or that in which the limits of risks are designated only by certain fixed periods of time. The courts of law hold that there is no contract in time policies that the ships should be seaworthy, even at the commencement of the risk. This rule has been sustained on the ground that a shipowner may not have had any intelligence from his ship for a lengthened period, and cannot give a warranty for her seaworthy condition.

Mr. Shaw Lefevre, in his evidence before the Commission, suggested that there should be an implied and continuing warranty of seaworthiness in all time policies, as is now the case in voyage policies.

Distinction between time and voyage policies

The distinction between time and voyage policies, in respect to the warranty of seaworthiness, leads to this strange anomaly. The owner of a ship insured under a time policy is allowed to recover his insurance, even though the vessel were unseaworthy. Shippers of goods must insure under a voyage policy, and they cannot recover if the vessel is not seaworthy. Thus the shipowner, who has the power to regulate the condition of his ship as to repairs and equipments, and neglects to do his duty, recovers his insurance, while the proprietor of the goods, who is an innocent sufferer, loses all claim on the underwriters.

Compensation for shippers

True it is that shippers of goods, though they cannot recover their insurance from the underwriters, have a claim for compensation against the shipowner. But, by the bill of lading usually employed, shipowners have succeeded in contracting themselves entirely out of this obligation. It has therefore been proposed that no words introduced into the bill of lading shall exonerate the shipowner from the obligation to make and keep his vessel in safe condition, and that the underwriter shall not be liable for loss, whether under the time or the voyage policy, unless it can be proved that the shipowner and shipmaster had used all reasonable efforts to make and keep the ship seaworthy.

Anomaly in law of constructive total loss

In this connection an anomaly may be pointed out in the law relating to constructive total loss. There is, says Mr. Arnould, a constructive total loss of a ship when by the perils of the sea she is converted into such a wreck that it would cost more money to restore her than she would afterwards sell for. The assured may, under these circumstances, give notice to the underwriters that he abandons the wreck and claims for the total loss. But, for the purpose of deciding the claim of the shipowner, the value taken into consideration by the courts is not the value as agreed in the policy, but the actual estimated value of the ship; and this may often be a much less amount than the valuation in the policy.

Suggestion of Mr. Shaw Lefevre

Mr. Shaw Lefevre suggested that in determining the question whether a shipowner is justified in abandoning his vessel to the underwriters, the value at which he has himself valued his ship in the policy ought to be taken as decisive. Where a vessel is over-insured the present state of the law offers a great inducement to the shipowner to abandon the underwriters and not to do his best to save the ship.

Co-operation of underwriters necessary

It is unnecessary to enter into further details as to the law of insurance. It may indeed be questioned, as Mr. Justice Willes remarks, whether any alteration in the English law would be operative, unless the underwriters were sincerely disposed to aid in giving it effect. The insurance companies and underwriters who do business of the highest class rely chiefly on the character of their clients, and care little for the protection afforded by the law. Among people in a less fortunate position, the competition for business is such that no risk is refused if only a sufficiently tempting premium be offered. Underwriters have hitherto had little encouragement to seek redress for injustice in courts of law. The partiality to shipowners generally shown by juries fully justifies the observation of Mr. Shaw Lefevre, 'If they would only enforce the law a little more strictly in cases where there was an implied warranty of seaworthiness as between the shipowner and the merchant, there would be a much greater security that vessels would be sent to sea in a seaworthy state.' Impressed with the weight of evidence as to the unsatisfactory system under which such cases are tried before a judge and jury, our Commission recommended a judge and two assessors as a far better tribunal.

Partiality to shipowners by juries

Hasty alterations in the law not desirable

The law of marine insurance is an elaborate edifice, composed of materials drawn from the custom of merchants, the statutes of the realm, and the decisions of able and impartial judges. Such a law should not be altered hastily, nor without the most careful consideration of the probable effect of the changes proposed in relation to the seaworthiness of our shipping. Because abuses have grown up in the law, marine insurance must not on that account be condemned. Its value has indeed been recognised from very early times. It was introduced into England by the Lombards, together with the art of bookkeeping, the institution of banking, and other equally valuable aids to commerce. Rich men may, indeed, be independent of the protection it affords. The poorest class of shipowners, who navigate their own ships, do not insure, because they cannot afford to bear any expense not absolutely necessary to enable them to take their vessels from port to port. These men live from hand to mouth, from voyage to voyage; and, as they do not entrust their property to the care of others, they are free from the anxiety of those who have to bear unknown risks. But that great middle class who must constitute the majority of every trading community are in a different position. They have too much at stake to be able to bear the risks of maritime adventure without the protection of insurance; and, on the other hand, their interest in shipping is not distributed so widely as to justify them in becoming their own insurers.

Value of marine insurance

Aim of future legislation

The work to be done is of the utmost importance. Those who are opposed to load lines and surveys say truly that the commercial instinct of the shipowner and the experience of the shipmaster are the most reliable guarantee for the seaworthiness of shipping; and that Government surveyors cannot have the same practical knowledge as persons actually engaged in the trade. But that commercial instinct on which we are invited to rely must be less keen and less acute when by the over-valuation of the ship and freight the shipowner stands to win and not to lose by the loss of his ship.

The aim of future legislation must be to confine marine insurance to a simple contract of indemnity.

Advantages secured by a reform of the law

We should not allow ourselves to be deterred from dealing with abuses by ill-founded apprehensions. The marvellous development of our mercantile marine has been brought about by general efficiency of administration on the part of our shipowners, by the skill of our shipbuilders in the use of great natural advantages, and by the personal qualities for which our seamen are renowned. Such a reasonable reform of the law as it has been sought to indicate in these pages will but secure a more ample reward for well-conducted enterprise. The recurrence of preventible disaster entails high rates of premium. If half the money now lavished on insurance were applied in repairs and maintenance, in strengthening crews, in improving equipments, and in reducing the cargoes of the ships which are overladen, the seamen of our mercantile marine would be spared untold suffering and anxiety. The charges imposed on the community at large for freight would be lightened, and the discredit would be removed which reckless shipowners have brought on a branch of enterprise in which it is the pride and boast of this country that she holds a foremost place.

XII

TYRANTS OF THE SEA: SHOWING SOME TALES OF SUFFERING IN THE MERCHANT SERVICE

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Sufferings from other causes than unseaworthiness

IN recent years great efforts have been made to improve the lot of seamen, and a Commission is now once more conducting an inquiry into the causes of the loss of life at sea. In the present short paper it is not proposed to deal with the seaworthiness of ships. The object is to call attention to the suffering seamen endure from other causes. Mr. Matthews, the secretary to the British and Foreign Sailors' Society, has been devoting himself lately to an inquiry into some of the terrible incidents which have recently occurred. As the President of the Society, I deem it my duty to give publicity to the harrowing narratives which have been brought to our knowledge. The incidents to which it is proposed to call attention are, as we confidently believe, of an exceptional nature; but the public will be justly indignant that such cruelties should from time to time take place, and they will demand that an effort shall be made to provide a remedy.

Tales of cruelty at sea are not new. They have been described with moving eloquence by powerful writers. The flogging scene in Dana's 'Two Years before the Mast' must be vividly impressed upon the minds of many readers. The sufferings endured in ships sailing under the flag of the United States attracted the attention of another gifted American writer. Mr. Nathaniel Hawthorne, when serving as United States Consul at Liverpool, in a despatch addressed to the Secretary of State on June 17, 1857, expressed himself as follows :—'The instances of cruel treatment that have come under my notice include a great mass of petty outrage, unjustifiable assault, shameful indignities, and nameless cruelty, demoralising alike to those who perpetrate and to those who suffer.' The crews he described as being generally foreigners, who, from their roving habits, seldom remain long under the jurisdiction of the United States. Hence a difficulty was experienced in securing the offenders, and in inflicting the punishments which they deserved.

Tales of cruelty at sea

Mr. Hawthorne on cruel treatment

We have a more recent contribution to the American literature on this subject from the pen of Mr. Gray Jewel, M.D., for some years United States Consul at Singapore. In 1873 he published a book entitled 'Among our Sailors.'[1] A copy of this work was placed in my hands by Mr. Wodehouse, the British Consul-General at Honolulu. Its pages are full of tales as heartrending as the narrative of Mr. Dana.

Mr. Jewel, 'Among our Sailors'

While Mr. Hawthorne was moved with pity by the incidents which came under his observation at Liverpool in connection with American shipping, in the British service the sufferings of the seamen were not less cruel. A debate took place in the House of Commons on August 2, 1859, upon cruelty to merchant seamen on the high seas. Mr. Milnes introduced the question, and in his speech spoke more particularly of the minor

Debate in House of Commons, 1859

brutalities, or Consuls' cases. The number of sufferers in these cases who had been in hospital in Liverpool from June, 1857, to June, 1858, had been no less than 135, while from the latter month to January, 1859, the number had been 80; and the number in the workhouse from June, 1858, to March, 1859, had been no less than 23. Commenting on the instances of barbarous treatment of merchant seamen which had been brought to light, and on the difficulty of dealing with the question, the 'Times,' in a leading article, said:—

'Times' leading article

'Suppose a ship to leave one of the most distant ports of the world for Liverpool or New York; suppose it to toss on the ocean for some four months, now beaten by storms off Cape Horn, now becalmed, with the pitch seething in its crevices, on the Equator; suppose the master to be an ill-conditioned, passionate, illiterate brute, with just mind enough to work the reckoning when he is sober, and totally unrestrainable when drunk; suppose this person, under impulses generated by a despotic power and brandy, to take a violent dislike to a particular seaman; what is likely to be the life of this unhappy man while his tyrant is on blue water, without any control but fear of mutiny, or an indirect prospect of an inquiry after reaching port?' The annals of the Liverpool Police Court and hospitals will answer the question.

Mr. Matthews, 'Belaying-pin Gospel'

In a volume just published, entitled 'Belaying-pin Gospel,'[1] Mr. Matthews describes his own experiences at sea, and whilst serving as British chaplain in the port of Antwerp. His volume contains some other narratives of recent date which must make the reader's blood boil with indignation. The first which I shall select is taken from the 'Sailors' Magazine,' published by the American Seaman's Friend Society. The number for September, 1883, contains the following narrative, copied from the 'San Francisco Daily Repository' of March 5, 1882. The barbarities described occurred on board the ship 'Gatherer' on her passage from Antwerp to Wilmington, California :—

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[1] Sailors' Institute, Shadwell, London; S. W. Partridge & Co., 9 Paternoster Row. Price 1s.

Barbarities on board 'Gatherer'

'The testimony showed that the first mate, Watts, knocked down Adling, a sailor, and blinded him with a kick in the eye as he lay on the deck ; that the second mate, Curtis, knocked down Jacques de Bayrer with a belaying-pin, splitting open his head and breaking his nose, and, while his shrieks rang through the ship, Curtis made him clean up his own blood ; that Peterson was beaten by the first and second mates till his blood ran about the deck ; that Thomassen was never without scars on his face from the day of leaving Antwerp ; that McKew was dragged round the deck with a watch tackle ; that Rasmussen was struck in the face with brass knuckles till he sought to end the torture by committing suicide ; *that Hansen drowned himself to escape the cruelties of the mates ; that Soucher, a boy, was beaten and worked till he fell overboard ; that Tommy, the steward, was beaten on the head until he became a maniac, and is now in an asylum.*

Two sentences were inflicted upon Watts—four years for putting out the eye of Gustave Adling, and two years for beating Rasmussen with brass knuckles, the latter sentence to begin on the expiration of the former.

Case of boy Limborg on board 'J. Williams'

The following story of the miseries which are sometimes endured at sea is of quite recent occurrence. Mr. Matthews quotes the case before the North Shields Police Court, of which a brief account was given in the 'Newcastle Daily Journal' of April 30, 1885. The persons charged were the master of the vessel, aged twenty-six; his brother, the chief officer, aged twenty-one; and the second officer of the ship. From the opening statement of the prosecuting counsel, 'it appeared that, in the beginning of March last, the brigantine "J. Williams" was at Wilmington, where the lad whom the prisoners were charged with having murdered, together with several others of the crew, who would be called as witnesses, were shipped on board for the purpose of coming to England. The lad, as far as could be ascertained, signed articles on March 9 last. After the crew had gone or been put on board the vessel, she lay in the river at Wilmington for three or four days, when the vessel crossed the bar and went to sea. The charge against the prisoners was that they, one and all, almost from the time of the lad going on board up to the day of his death, on March 25, ill-treated him brutally, and it would be within the province of their worships to decide whether the entry in the log-book signed by the captain, which said that Limborg died from heart disease, or the evidence which he would produce pointed to the cause of death. The witnesses whom he would call would conclusively prove that from the day of Limborg going on board the brigantine up to the day of his death, he was not only kicked and struck by these men, but that the clothes were taken from his back, and he was made to stand on the deck and carry out his watch in a semi-nude condition, in weather which their worships could imagine would prevail in the Atlantic at that time of the year. When the lad went on board he was strong and well. His health gradually gave way. It would be for the magistrates to say whether his weakness and ultimately his death were caused by the ill-treatment of the prisoners. It would appear in the evidence that

Continual ill-treatment

Kicked and struck daily

while the lad was at the pump it was the habit of the captain to go behind him and kick him in the leg just behind the knee, which made him fall forward, when the handle of the pump came upon his head. Coming up to the day of his death, on March 25, he should be able to prove that on the morning of that day the lad was violently assaulted by the captain and the mate. They afterwards watched him to see if he could eat, the remark being made that if he was well enough to eat he was well enough to work. He believed the lad did endeavour to take a little soup, which he could hardly swallow, as his mouth was swollen to a tremendous size, and he was otherwise in a very bad condition. One of the crew was then ordered to tie a rope round his body, which he did ultimately, after at first refusing. He was then dragged about with the rope and beaten. The lad ultimately died, and the body was committed to the deep in a brutal manner.'

Brutality of the captain

Death of the boy

The prisoners were sentenced to seven years' penal servitude.

Sentence

Such are the sufferings which under brutal officers may sometimes be endured by the seaman in the course of his employment afloat. When he returns to port he becomes in too many cases the helpless, and perhaps the willing, victim of the crimps and boarding-house masters, who live by plundering the seaman. If the seaman suffers much from the harpies who fasten upon him in our home ports, where the proceedings are restrained by the efforts of the Board of Trade and the water police, it will readily be believed that in foreign ports, where such protection cannot be extended to him, the condition of the seaman is far more sad and more helpless. It is thus described in a communication recently addressed to Mr. Matthews by Her Majesty's Consul, Mr. F. Bernal.

Helplessness of seamen

After twenty-six years' consular experience, he writes as follows :—

Robbery of sailors at Havre. Report of British Consul

'There entered the port of Havre each year (on an average of three years) 28,596 sailors on board British ships. At no port in the whole world is the British seaman more beset by temptations of every kind, or more injured or swindled and robbed by a certain number of people, unfortunately almost without an exception his own countrymen, whose sole profession it is to live by and on him, than at Havre. The fact that these frauds and robberies take place in a foreign land, the language of which is unknown to the victims, and the difficulty of making their complaints understood by the authorities very great, and that care is almost always taken to intoxicate, and sometimes even drug, the sailor before robbing him, makes it in nearly every case a matter of impossibility to obtain sufficient evidence to convict the perpetrators of these heartless robberies. There is yet another phase of this gloomy picture. England has ever justly prided herself on being among the foremost of those nations who have waged war against slavery, and yet there are hundreds of men sailing under her flag who are nothing else but white slaves. I allude to that class of men who pass their lives afloat, going principally to and fro between the ports of the United States and those of this continent. The majority of these men having originally spent or squandered their wages, have nothing to receive at the end of a voyage, and have nothing to look to but the advance they will get on reshipment—a very pernicious system, but one which it is impossible to do away with by law in foreign ports. They are accordingly taken possession of by boarding-house keepers, who provide them with lodging, food, and drink, and sell them as soon as they can to vessels requiring new crews. This goes on, in many cases, voyage after voyage and year after year. It is not to be wondered at that such a system should lead to very evil results. so that on such vessels the boot and the belaying-pin are too often used to drive these men. Nay, I know of my own experience of more than one case where the loss of a vessel may in all probability be attributed to this state of things.'

Temptations on landing after a long voyage

It would indeed be an unprofitable task to bring to light tales of atrocity without endeavouring to suggest remedies. And first we must look to the seamen themselves. They have it in their power to do much to better their condition. Seamen are too often guilty of reckless improvidence. In bringing this charge against them due allowance will be made for temptations which specially belong to their hard calling. After a long voyage at sea, after being kept in close confinement on board ship, subjected to great personal discomfort, and weary with a monotonous existence, the sailor on landing surrenders himself a too ready victim into the hands of harpies whose corrupting influence upon our seamen is one of the dark blots in our civilisation. Those whose occupation takes them frequently to the vicinity of the docks are familiar with the painful spectacle of a ship, just returned home from India or China or the Antipodes, surrounded, even before she has been moored to the quay, by a band of jackals, ready to pounce upon the seamen as they come ashore, and to lead them away to some miserable haunt where the hard earnings of many months are consumed in a few days, or hours, of vicious indulgence. It is creditable to the seamen that so many of their number resist the temptations to which they are exposed, and, after having been knocked about in their younger days at sea, settle down in later life in homes which they maintain in decent comfort. No inconsiderable proportion of the men who serve before the mast acquire a sufficient education to enable them to pass the Board of Trade examinations and to become certificated officers in the merchant service.

Generous nature of seamen

At the present time, when the port of London is crowded with men pinched with poverty and hunger, it would be unjust to pass over in silence the noble generosity of our brave, true-hearted seamen. So long as he has a shilling in his pocket, the sailor is ever ready to divide it with any old shipmate whose condition is even more desperate and destitute than his own. Let us, therefore, make allowance for the improvidence which is found amongst seafaring men. But, while making this allowance, it will be obvious that the first remedy for the destitution into which many have fallen is a remedy which the sailor alone can apply by the exercise of greater prudence and self-restraint. The crimp would be powerless if the sailor were not improvident. It is because the earnings of the previous voyage have been squandered that the sailor is driven to pawn the wages to which he may be entitled for his next voyage at usurious rates of discount in order to procure the few miserable garments included in his sea-kit. This is scarcely the time to insist further on the failings of seamen.

Their improvidence and its effect

'Tis all men's office to speak patience
To those that wring under the load of sorrow.
But no man's virtue nor sufficiency
To be so moral when he shall endure
The like himself.

Suggestions by Mr. Matthews

Mr. Matthews concludes his work with several suggestions of a practical character. Space will only permit me to give the following :—

(*a*) That it should be a punishable offence, both in the shipping master and the captain of the ship, on responsible representation, for a sailor to be put on board a ship drugged or drunk.

(*b*) That, seeing that we have almost as many of our ships in foreign ports as in our home ports, our Government be encouraged not only to use the services of our Consuls more effectively, but to open a serious interchange of views with foreign Governments for the removal of abuses and the better protection and improvement of seamen.

(*c*) That as an officer's certificate is either suspended or cancelled for incompetency, so convictions for inhumanity should carry with them the cancelling of certificates.

A State Pension Fund desirable

I would conclude by urging strongly the establishment of a Pension Fund for seamen. On a late occasion it was my duty to assist at the midday meal which has recently been given to destitute seamen by the British and Foreign Sailors' Society. It was painful to see so many grey-headed men in the receipt of our scanty benevolence. When shipping is depressed, and the number of seamen offering themselves for employment is in excess of the demand, it is natural that captains prefer to take young and able-bodied men rather than those who have reached a less vigorous age. For these men the prospect is sad indeed. The Seamen's Pension Fund should be supplemented by contributing the balance representing the value of the unclaimed effects of deceased seamen, which is at present handed over to the Exchequer. This unclaimed balance may be estimated at 8,000*l.* a year. Such a sum would constitute a most valuable subsidy, and minister effectual relief to many a starving old seaman. As an element

How it should be supplemented

in the national income it is infinitesimal in amount, and it is not worthy of this great empire to retain for public purposes a sum derived from such a source. The Royal Commission of 1874 expressed the opinion that a self-supporting Pension Fund for the benefit of seamen, as suggested by the Manning Commission of 1859, might prove of great value in creating a tie to bind the seamen of Great Britain to the merchant service of their own country, and thus indirectly strengthen the naval power of the empire.

Unpleasant duty calling attention to these abuses

It has been an ungrateful task to call attention to abuses of authority on board ship, of rare occurrence, save in a certain class of the mercantile marine. All my personal associations with the officers of the merchant service have been most pleasant. The standard of professional ability in the service is worthy of the traditional fame of England. The general moral tone is admirable. Our best officers not only denounce these cruelties, but deplore the power of the crimp in many seaports to degrade our seamen. They do more, they co-operate with the agents of the Society of which I am President, and, when far out upon the sea, often act the part of chaplains and put forth noble efforts to educate and elevate the crews committed to their care. It is the more painful, therefore, that their noble profession should be damaged by such cruelties as those of which some instances have been given. These crimes should be kept in check by vigorous action on the part of Consuls, and by more severe punishment.

XIII

MERCHANT SHIPS AND SEAMEN

ADDRESS AT THE SEAMEN'S CONFERENCE, CARDIFF,
TUESDAY, OCTOBER 8, 1889

BEFORE dealing with other subjects, I desire to express my gratitude for the privilege of being invited to attend the first representative assembly of the seamen and firemen of the British mercantile marine. It is not easy for one so closely connected as I am with the class of employers to command the confidence of the employed. If I enjoy that confidence in the present instance it is an honour which I highly appreciate, and a responsibility of which I am fully sensible.

Importance of the subject

The occasion is one of no slight importance. To improve the condition and to raise the efficiency of the merchant seamen and firemen are objects of the greatest moment to a nation long pre-eminent for maritime enterprise, and which is gaining on all competitors in yearly increasing proportions. It is not going too far to say that some prime elements of our national greatness are in the keeping of the important body whose representatives I have the privilege to address. We have won our position at sea by their skill and courage. We shall lose it if they deteriorate.

Improved security for life at sea

Let us now turn to the main object of the present Conference—the improvement of the condition of the seaman. And first let us consider the loss of life at sea, and the means for its diminution. Spurred forward by Mr. Plimsoll, we have made great efforts in recent years to increase the security for life at sea. What has been the practical result? The latest statistics as to the loss of life by wreck and casualty are summarised in a sentence by Mr. Gray. The loss in ships belonging to the United Kingdom was 1,543 in 1887–88, being 382 less than in the preceding year, and 489 less than the average for the previous ten years. The improvement is due to many beneficent causes. To no individual is honour due in the same degree as to Mr. Plimsoll.

Loss of life in missing vessels

Something, as we see, has already been accomplished. Can we not do more? Mr. Gray points out that, of the 1,543 lives lost in 1887–88, no less than 789 were lost in missing vessels. And when we look to the cases scheduled by the Board of Trade, in many instances—and notably in large steamers trading between British ports and the Mediterranean—it is difficult to resist the conclusion that disaster was due to overloading or to other preventible causes.

Maritime Conference at Washington

It is satisfactory to know that an international marine Conference is now assembled at Washington, which is to take into consideration the whole subject of the loss of life at sea and the means for its prevention. The rule of the road, the regulations to determine the seaworthiness of vessels, and the load line, will be included within the wide scope of the deliberations. We may look forward to good practical results from the inquiry. But when all that regulations can accomplish shall have been done, we must remain dependent on the agency of men. Every seafarer is daily and nightly made sensible of the risks caused by recklessness and stupidity on the part of those placed in charge of life and property at sea. The punishment for gross instances of neglect is not sufficiently severe. An injustice is done to good men by the impunity which others enjoy who have grievously failed in the discharge of their duty.

Increase of the Naval Reserve desirable

In the consideration of measures for the improvement of the condition of the seamen, I have dealt first with the ships in which they sail. Let us pass from the ships to the men. As a means to raise the condition and qualifications of the British merchant seaman no step would be so effective as the enrolment of increased numbers in the ranks of the Royal Naval Reserve. Additional strength is needed for the defence of the Empire. The Act of Parliament sanctions 30,000 men. We are 10,000 short of the numbers recommended twenty-nine years ago. It can hardly be contended that our responsibilities or our national commerce have diminished in the interval. While the Reserve would give valuable support to the Navy, the service offers great benefits to the seamen enrolled. The discipline, the annual retainer, the pension in old age, are boons which every thoughtful man should appreciate.

Wages of seamen. Piecework and by time

My hearers would, I doubt not, be unanimously of opinion that a general rise of wages would be the most direct and practical means of improving their condition. Speaking generally, there is a fairly even proportion between wages and work all over the world. Low pay generally means ineffective labour, and good pay effective. Having enunciated a broad principle, I hesitate to offer advice on its practical application. It is preferable, when practicable, to make wages dependent on work--to pay by the piece rather than by the day. In the fisheries and in coasting voyages the seaman can be paid on this plan. In other branches of the shipping trade it is not possible; and here the scale of pay becomes a question of competition, or, in other words, of demand and supply.

Wages of seamen compared with artisans and labourers

Taking the weekly wages of unskilled labour, at an average for the whole community, at 17*s.*, and the weekly wages of skilled artisans at 34*s.*, and comparing these rates with the wages of firemen, ranging from 60*s.* to 80*s.* a month, and with the wages of able seamen, ranging from 55*s.* to 60*s.* per month for sailing ships, and 70*s.* to 80*s.* per month for steamers, and adding to the sum received in cash the value of the provisions supplied, it will be seen that the seaman is rather better paid than the ordinary labourer, but receives considerably less than the skilled trades on shore. Taking into view the conditions of a seaman's life—the dangers to which he is exposed, and his long separations from home—it is evident that he is but poorly compensated for the privations and hardships to which he is subjected—

O'er the wild waters, labouring far from home,
For some bleak pittance e'er compelled to roam,
Few hearts to cheer him through his dangerous life.

It is only the spirit of adventure which can carry men into such a vocation, and that spirit is naturally strongest in youth. Before he has passed the middle term of life, the sailor should have established himself in some more desirable occupation than that of an able seaman before the mast in the foreign trade. He should have settled ashore as stevedore or rigger. Some have done better than this. They have become shipowners in a large way of business.

Provision for advancing years

Little prospect in an advance of

I wish that I could feel myself justified in holding out to the seamen any immediate prospect of higher wages. It is my duty to express the conviction that some improvement in shipping must precede an advance in wages. The position of the seaman can be readily gauged by looking to the quoted prices of shares in shipping companies. Unfortunately they offer few indications of even moderate prosperity. The majority of the great steam companies are at a discount. The shares of the Peninsular and Oriental Company are alone quoted at a handsome premium. This company occupies an exceptional position in conducting the great postal service to all our Eastern possessions. In considering the position of the seaman, the opportunities of advancement open to any man with some elementary education should certainly be taken into account. A large proportion of the certificated officers of the merchant service have begun their career before the mast.

Success of system for transmission of wages

While I hesitate to offer an opinion as to the rate of wages, it is more easy to advise the seaman as to his duty in taking care of the money which he earns. Among the practical services which the Board of Trade have recently rendered, perhaps nothing has been so successful as the system introduced for the transmission of wages due to seamen on their arrival in port. Many a wife and child has reason to bless the agency which has protected the earnings of the breadwinner, on whom they are dependent, from dissipation. It is most desirable that a system which has already effected so much good should be established more effectively than hitherto in foreign ports.

A Pension Fund desirable

As a remedy for improvidence, it is much to be desired that an organisation should be established under the Board of Trade for providing a Pension Fund for British seamen. The proposal is beset with practical difficulties. It would certainly be premature to call for any final expression of opinion from the present Conference. The seamen of the Naval Reserve, as I have already reminded you, enjoy the advantage of a pension in old age. For others it is open to take advantage of the facilities provided by the Government for the purchase of annuities, or to become members of a benefit society.

The cautious language which I have used in dealing with the question of wages may not have given unmixed satisfaction to my audience. I shall probably please them better in approving the establishment of a Union for seamen and firemen. If our trade could be carried on in vessels of small tonnage, owned and worked on the co-operative system by their officers and crews, no contentions could arise, and no special organisations would be required to protect the interests of labour. In the actual conditions of commerce the identity of interests, which is the ideal of the cooperator, cannot exist. The constant tendency to increase the size of ships renders it more and more impossible that the capital necessary to build and maintain them can be provided by the seamen.

A Union for seamen and firemen

Combination necessary for protection of interests

In all industries concentration of effort has been found advantageous. Companies have taken the places of individuals. The coach has given place to the train, the forge to the foundry, the hand-loom to the factory. The cost of production has been reduced, but the employers and employed have been drawn further apart. Trades Unions have been the natural outgrowth of the new order of things, and if combination has been necessary for protection of the interests of other classes of workmen, it is especially necessary for the protection of the interests of seamen. Their character has been drawn with faithful and graphic touches by Sir Cornewall Lewis :—

'The seamen are a nation by themselves, a humorous and fantastic people, fierce and rude in whatsoever they resolve or are inclined to, unsteady and inconstant in pursuing it.'

Duty of leaders

A more than ordinary responsibility will lie upon the officials of the Seamen and Firemen's Union. Their clients for the most part are not conspicuous for commercial sagacity. It will be the duty of the leaders to keep themselves informed of the state of trade, to watch the fluctuations in freights, to note the dividends and other indications of the varying prospects of the shipping trade. They should know when to press and when to restrict their demands. Above all, their influence should be used to raise the moral tone and seamanlike efficiency of those who look to them for guidance.

XIV

CHOICE OF A PROFESSION—THE SEA

'PALL MALL GAZETTE,' JULY 25, 1890

AN INTERVIEW WITH LORD BRASSEY

IN looking at the mercantile marine as a profession, my view is influenced favourably by the fact that I have deeply rooted in my nature a love of the sea. To me the sea is a passion. I feel the Byronic sentiment, as Childe Harold expresses it—

> In all time,
> Calm or convulsed—in breeze, or gale, or storm,
> Icing the pole, or in the torrid clime
> Dark-heaving—boundless, endless, and sublime—
> The image of eternity.

To me it is elevating to be on the sea. That sense, no doubt, exists in other men. I never could understand what you hear voyageurs and non-professional men speak of—that is, the monotony of the sea. No doubt to the passenger with no duties and no responsibilities—with nothing to do from the early coffee to the overloaded British breakfast, from the unnecessary lunch to the heavy dinner and supper—the sea is dull and dispiriting ; it is a gross life without aim or purpose ; but to the man who looks at the sea as a profession it is quite otherwise. Navigation demands unceasing care ;

No monotony in the calling

the heavenly bodies must be observed at frequent intervals; in the case of a steamer the deck officer is not called upon to pay so much attention to the method of propulsion, but even in a steamship the captain and engineer must work together to get the best results out of the motive power. When you come to a sailing vessel there is need for the most unceasing vigilance; to trim every sail, to take off sail before a squall catches you and you are deprived of your canvas by the forces of nature; to set every sail as soon as a falling breeze demands it—all this requires perpetual watchfulness, so as to get the vessel along to the very best advantage. Then there is the perpetual alternation of fine weather and storm; and the battle with the storm is one of the noblest efforts to which human skill can address itself. An infinitude of things must be done, and done well and with good nerve. The spirit must not be overpowered by the circumstances. And it is remarkable in the handling of ships in heavy weather how one sail more or one sail less makes all the difference between their falling off into the trough of the sea and riding over every sea like a thing of grace and beauty.

Vigilance required in a sailing ship

Then if you consider the profession from the point of view of usefulness, you can conceive no position of more practical utility than the command of our great merchant vessels. We Britishers belong to a nation which is nothing if not a great maritime nation, and by virtue of her maritime power perhaps the greatest of the nations. And it is something to be associated with the greatest industry of the country, and to be engaged in a service which brings to the gloomy North the products of the sunny South, and takes away in exchange the manufactures which our northern energy has produced.

Usefulness of the sea profession

The mercantile marine is the foundation of the naval

Naval power based on mercantile marine

power of the country. Take away the mercantile marine and naval power is an artificial plant. It has no basis, nothing to support it. Whether you look at the *matériel* or the *personnel* of the fleet, the mercantile marine is its foundation.

Other professions crowded

You have to look at the mercantile marine from another point of view. In these days the better recognised professions, those to which attention has hitherto been almost confined—Law, Medicine, and the Church—are so crowded that men have to wait long before an opening comes. It is very weary work, and men often ask whether there are not other professions or employments where the conditions are more favourable to early success. From that point of view I think the profession of the mercantile marine has some decided advantages. The cost of the professional education is much less than in the case of Medicine, or the Bar, or even the Church. The Church takes four years—three years at a university and one at a theological college, with a long course at some school prior to that. You cannot be ordained until some years are spent in costly education, and when ordained you may have to accept a curacy of 50*l.* to 60*l.* a year. For the Bar you have to go through a course of study after completing your university course, and pay high fees to a barrister for the privilege of reading in his chambers. That has to be continued for two years, and after having left the barrister's chambers you have to sit in court for many more years, and nothing comes until you have reached middle age. Medicine, again, requires a long preliminary training and much waiting before a position is secured. In the case of the officer in the merchant service, if he approaches it through the most expensive channels and receives the best kind of education that can be given for the profession, he

Greater cost of entering other professions

Good and cheap education in the training ships

begins by going to the 'Conway' on the Mersey, or the 'Worcester' on the Thames, staying there for two years. He has all the advantages of a good public school for a comparatively moderate sum. He gets his education and his board and lodging at something less than cost price. These vessels have been established by shipowners without any notion of profit, and therefore the education is provided on the most favourable terms. On leaving the stationary training ship and going to sea the young officer enters himself in some suitable vessel as an apprentice. If he commences upon the terms which have hitherto been usual, he would pay a premium of 60*l.* to 100*l.* for four years, and during that time no expenses have to be borne by his parents or friends except for his clothes. Perhaps in the latter part of his term he will earn a small wage. At the end of the four years he is qualified to pass the Board of Trade examination, and he can join a ship. All the expenses of education are over, and at eighteen, nineteen, or twenty he is earning some emolument in his profession.

Cost of technical training afloat

Apprenticeship system

If the system of apprenticeship which I have inaugurated in two ships of an Australian line, one of which has sailed and the other is about to proceed to sea, should be chosen, the education of the young man will cost his friends 150*l.* more than the sum I have named; but in that case he will have completed his professional education for, say, 350*l.*, beginning at thirteen years of age and ending at nineteen, by which time he will be an officer earning a small professional income. Having put his foot upon the first rung of the ladder, the prospects of advancement are good. You will find in the mercantile marine many men in command of the finest ships at a comparatively early age. They may have had the advantage of influence and friends to back them, but even without influence they are qualified to earn, and do obtain, the best emoluments of the profession early in life.

Emoluments of captains in the merchant service

As to the emoluments, I believe in the case of the very finest ships of the mercantile marine they are not less than 1,500*l.* a year. The captain of the 'Teutonic' has as much as that. In the Peninsular and Oriental it would be under 1,000*l.* a year. In other steam services not so distinguished it would be less, and in the case of the finest sailing ships it would amount to 300*l.* or 400*l.* a year. Besides that, you are housed, if you may use that term of a life afloat, and you are not at any expense for table. What you earn is to a large extent put by. The captain may have a few turns in trade, or he may have the letting of his cabin, for which he may get 50*l.* a voyage.

Other employments open

In connection with the professional prospects it should be borne in mind that, in the case of men with commercial aptitude, there are opportunities of leaving the sea and entering upon a commercial career on shore. Many of our most successful shipowners have risen through the various grades of apprentice, officer, and captain to become the owners of great lines of vessels. In other cases men may not become the owners, but may secure a very desirable billet in the superintending of shipping on behalf of shipowners. They are also eligible for many appointments in connection with docks and other undertakings connected with the sea. Then the man who follows the sea ranges over the world and touches at many ports and places where the openings are more numerous than in this over-peopled country, and he sees his way, if he has an aptitude to embrace opportunities, of entering life, under very favourable conditions, as a colonist or as a man of business at one of the great ports abroad. There is much promotion going on from the mercantile marine to cognate professions, and these opportunities should not be put out of view by those who are considering what the prospects are that the sea offers in endeavouring to make the choice of a profession.

Drawbacks to sea life

I would say that the great drawback to the sea is the separation from home. If the duties of the seaman began every morning at a convenient hour and terminated in the evening at another convenient hour, and he could return daily to his happy home and fireside, I should say it was the most perfect employment. Unfortunately that is not the case. In following the profession you have naturally to endure many long separations from home. If there is any compensation, it is that when you do return home your presence is greatly valued, and the days on shore are serenely happy. Putting that compensation at its highest value, it remains that in a profession which offers many attractions this necessary separation from home is a hard and cruel drawback. All that has to be weighed.

Absence from home

No undue risk

I do not consider that there is an undue risk of life in well-found and well-appointed ships. There are certainly branches of trade in which there is danger. If a man proceeds to the Oil Rivers of Africa or to the coast of Rio in the yellow fever season he runs a fearful risk; but that is a small part of the trade, and if he pleases he can avoid those regions.

Age to give up a sea life

As to the age up to which the sea can be followed as a profession, much depends upon the measure of health that a man enjoys. Captain Cook was in command of the Cunard steamer, the 'Etruria,' up to the age of seventy-three or seventy-four. It is desirable for most men to leave the sea before they attain the age of sixty, but there are many who go beyond that time. The profession involves exposure at night, and long vigils, which are very trying in advancing years; but old age comes so differently to different men that you cannot lay down any rule. It is, however, not an old man's profession. There are no prospects of pensions in the merchant service, so that a man must provide for himself out of his income.

To sum up, I consider that to the sons of professional men and gentlemen, to whom the great cost involved in entering other professions is an insuperable barrier, the mercantile marine offers great advantages. If they select to go in the ships I am sending, or in other ships which I hope may be similarly equipped, there are no hardships to be endured which should be repugnant to the sense of poor gentlemen.

XV

SAILING SHIPS

SPEECH AT LAUNCH OF THE 'LORD BRASSEY,' AT ALLOA, SEPTEMBER 20, 1891

LORD BRASSEY, in returning thanks for the kind manner in which the toast was proposed and received, said he felt proud to see his name inscribed upon the bows of the noble ship which had just been launched. He took the deepest interest in the shipping enterprise of the country, and he most sincerely wished it success.

All lovers of the sea—and he might claim to be a lover of the sea—must feel a deep interest in the merchant shipping of the country. They all admired the great steamships of modern creation as perhaps the most remarkable monuments of human skill and contrivance, yet every old sailor had a warm corner in his heart for the sailing ship, and would be sorry to see that form of maritime enterprise abandoned. Comparing the sailing ship with the steamship, they must all feel that in some respects the life of the man who went aloft or did his work on the deck was more to be desired than that of the man who laboured and toiled in the stokehole. There was a beauty in the sailing ship, with her canvas expanded to the breeze, which they looked for in vain in the smoky discharge from the funnel of the steamship, and there

Beauty of the sailing ship

was a particular development of nautical skill in the management of a ship propelled by canvas alone for which they found no precise counterpart in the management of the steamship.

These were perhaps rather sentimental arguments in favour of the development of maritime enterprise in the form of sailing ships. There were other circumstances of, perhaps, a more prosaic character, but which were substantial circumstances to be taken into consideration, and which seemed to give to sailing ships the prospect of a long continuance. The wind, though an uncertain power, was a very cheap power; and there were many important descriptions of goods in regard to which it was not of consequence that the speed at which they were conveyed across the ocean should be the quickest possible. So long as they knew within a moderate range at what date the goods would be delivered, he did not know that it mattered very much whether a cargo of wool coming from Australia took fifty or seventy days, or whether a cargo of corn from 'Frisco took seventy or ninety days. The sailing ship was sometimes a convenient warehouse to the merchant. Provided she delivered her cargo in good condition, for many descriptions of goods the sailing ship was a convenient form of conveyance.

Wind a cheap form of power

Time not always important

These circumstances, which made in favour of the sailing vessel, had brought about the satisfactory result that they saw no diminution from year to year in the amount of the sailing tonnage in this country. Of sailing ships over 300 tons they had something like a tonnage of 2¼ millions, and the aggregate tonnage had been maintained at that total for a considerable time. While the amount of steam tonnage building for some years was, no doubt, considerably larger than the amount

Production of sailing ships still maintained of sailing tonnage, still the amount of sailing tonnage was being kept up at the tolerably level average of some thing like 100,000 tons yearly.

Better types now built

As to the types that were built, they had just seen launched a noble specimen of design in its application to the sailing ship, and while he earnestly hoped that the most favourable anticipations of Mr. Herron, and those who shared with him, might be fulfilled in regard to the pecuniary returns of the ship, he felt also satisfied that in the type of ship that they had just seen, and in the types of sailing ships generally which were now being produced, they had arrived at a higher degree of security and safety than had ever before been attained in the construction of ships for the purposes of commerce.

Mr. Plimsoll and the Royal Commission

The loss of life was now about half what it was ten years ago. They would all remember the time when Mr. Plimsoll was an active and enthusiastic worker in the cause of safety of life at sea. His energetic action led to the appointment of a Royal Commission to consider the whole subject. He had the honour of sitting on that Commission, and as the result of two years of taking of evidence, of careful consideration and deliberation, the Commission came to the conclusion that it would not be for the advantage of the sailor to substitute the responsibility of a public department for that responsibility which should never be taken from the owner and the builder and the captain of the ship. In making that recommendation they were not altogether supported by the sympathetic but uninstructed public opinion of the day, and he was therefore glad to see how experience had told in favour of their report. While the Board of Trade had exercised a due diligence in watching what was going on, yet the shipowner and the builder and the officers in command, on whom the responsibility had been allowed, in the first instance, to rest, had not proved unskilful, and had not proved unworthy of the public confidence.

Scotch enterprise in shipping

He would like to say that, coming there as an English visitor to a Scottish seaport town, it was a pleasant duty to acknowledge the importance, indeed, he might say the leading part, Scotsmen had played in the development of the maritime enterprise of the country. Whether as builders or captains in command on the deck, or as engineers in charge of the machinery of the steamships, Scotsmen seemed to take a leading part in all that was going forward in regard to shipping. While they owed so much of the success of their maritime enterprise to Scotsmen, they owed at least an equal debt of gratitude to Scottish enterprise and Scottish energy, and the general national characteristics of Scotsmen for the development and creation of that trade which the ships were built to carry on.

XVI

NAUTICAL EDUCATION

ADDRESS AT THE OPENING OF THE LIVERPOOL NAUTICAL COLLEGE, 1892

Need of Nautical Colleges

I HIGHLY appreciate the honour of being invited to take part in opening the Nautical College which, by the wise liberality of the Corporation, is to-day provided for the port of Liverpool. Having navigated some 230,000 miles in yachts, and traversed every ocean, I know the value of the work which it is proposed to carry out. Such a college as you have given to Liverpool was much wanted, and similar colleges are needed elsewhere. I hope that your example may be followed by other seaports.

Insufficient provision for nautical education

In the tonnage of her shipping England has a conspicuous pre-eminence. In facilities for acquiring a good nautical education we are behind rather than ahead of other nations. For the manning of our ships, for the education of the officers who are to command them, we have made no satisfactory provision. We pay heavily for the neglect. No structure of man's contriving, no skill or valour on the part of seamen, can resist those tempests which sometimes sweep the seas. Fog and darkness may baffle the most careful navigator, but we have a large percentage of avoidable loss through carelessness or incapacity. Captain Methven was one of the most experienced witnesses called by the Royal Commission on the Loss of Life at Sea. He said, 'As an assessor I have felt that the mode in which navigation was conducted in a portion of our merchant service has been discreditable to the country.' I might quote much from the reports of our Consuls abroad in the same sense. Premiums of insurance are a heavy charge on our shipowners. With the extension of professional education losses should be fewer and premiums lower.

Limited facilities now existing

In order to appreciate the necessity for the establishment of your College, let us look for a moment at the early training of the nautical profession as at present conducted. For the first stage in the education of officers of the mercantile marine we have in the 'Conway' in the Mersey and the 'Worcester' in the Thames admirable institutions, but taking only a limited number of boys, while the cost, moderate as it is considering the advantages offered, falls heavily on professional men of narrow means, and especially on clergymen and on officers of the mercantile marine. For the educational requirements of cadets and apprentices when first sent to sea, and for the later stages when preparing themselves to pass their examination for the certificate of the Board of Trade, nothing, so far as I know, has been done, save by the 'crammers,' who are the inevitable outgrowth of compulsory examinations.

Scope proposed for Nautical College

I now turn to the regulations and the syllabus of studies as proposed for the Nautical College. You begin by providing a school for boys who are looking to a career on the quarter-deck. The fees are fixed at the moderate sum of 7*l.* a year. For boys who are to serve before the mast you offer a course of instruction for the small charge of 1*l.* A third department of the College is designed to afford to candidates for Board of Trade certificates special facilities, both scholastic and technical.

You furnish all the necessary appliances for instruction in seamanship. Another subject not inferior in importance, the study of steam, is comparatively neglected. Later I hope to see your College fitted with such machinery and models in motion as are used for instruction in steam at the American Naval College at Annapolis and on board the 'Britannia' at Dartmouth. The Government should help you in this matter. Much is being done by the Government for technical education in all its branches. The training of the sailor should not be excluded in the appropriation of public funds.

The higher educational course

The higher school which completes your scheme of education will, I hope, be largely used. It will afford opportunities to masters and mates to study mathematics and the theory of navigation, and such practical subjects as magnetism, electricity, surveying, and meteorology. I see with satisfaction that you propose to give attention to the art of correspondence. Many deserving sea officers, with a thorough practical knowledge of their profession, are deficient in English scholarship. To know the capabilities of our mother tongue is of the greatest advantage in every profession and every walk of life. The study of modern languages is the last subject in your syllabus. I earnestly hope that its position on your list need not be accepted as evidence that it will be comparatively neglected. Our Consuls in foreign ports have again and again reported that British shipmasters are lamentably inferior as linguists to the shipmasters of other nations. Ignorance of languages may sometimes lead to the loss of profitable business.

Examination standards

And now, having taken a brief survey of the work which you propose to carry out, it seems appropriate to refer to a few kindred subjects. It is an obvious

Masters' and captains' certificates

remark that it is useless to set up colleges and schools unless we take the necessary steps to secure their efficiency. Much of that efficiency will certainly depend on the standard set up in the examinations for which students are called upon to prepare themselves. Board of Trade examinations have not advanced and developed with the general progress of education. The compulsory examinations enforced since 1854 under Mr. Cardwell's Act are much inferior to the voluntary examinations which preceded them. The late Mr. Gray, who was so long at the head of the Marine Department of the Board of Trade, and did such excellent service, recommended an entire revision of the present classification of masters and mates. He considered that those only should be styled captains who could pass in the subjects of the extra examination. There is always an official defence for everything, and the official defence for the retrograde policy which has been adopted is that a compulsory examination must be a minimum, and that where the range of duties extends from the command of an Atlantic liner to that of a collier brig no one standard can fit them all. It does not seem difficult to meet this objection. Certificates of efficiency to command should be graded. The standard of examination should bear a more direct relation than it does at present to the importance of the command for which the officer is certified. It is for the Government to take the lead in this matter by giving preference when chartering to vessels commanded b extra masters, and by requiring that they should b employed in command of subsidised merchant cruisers.

Subsidies to fast steamers

The policy of giving subsidies to merchant cruiser so far from being abandoned, should receive furth development. The fast steamships of the mercantil marine, if internal subdivision and protection o machinery are duly considered in the original design, must be a most valuable reserve of cruisers for the Navy.

Manning the Navy

I would now refer to another aspect in which the work of this College may justly be regarded as of national importance. We have made great efforts of late to strengthen the Navy. We have been building ships; we have now to provide the crews. To maintain in peace the *personnel* required in war would cast an intolerable burden upon the taxpayers; and if we had the men we could not, except at an enormous cost, employ them sufficiently at sea to secure efficiency. If in any respect the Reserve is not efficient, let us make good what is wanting. The most perfect force of reserve men would cost less than three or four times the number on the active list. It never has been and it never will be possible to maintain the *personnel* of the Navy in peace at a war standard. In 1764–70 we had 11,760 seamen and 4,300 marines. In 1783 the force afloat numbered 84,700 seamen and 25,300 marines. In the peace years, 1784–91, the number of seamen fell to 14,000 and the marines to 4,000. In 1811–12–13 we had 113,600 seamen afloat and 31,400 marines. During the struggle with the Southern States the United States Navy increased in proportions quite equal to those indicated in the figures which I have read. Viewed in this connection, the Liverpool Nautical College will doubtless become an institution of national importance by assisting to furnish men, and especially officers, for service in the fleet in case of war.

Number of men in peace and war

XVII

THE ROYAL NAVAL RESERVE

SPEECH AS CHAIRMAN AT ANNUAL DINNER OF THE ROYAL NAVAL RESERVE ASSOCIATION, MAY 1, 1894

I KNOW it will not be necessary for me to trouble you with many words in order to establish the claims—the signal and splendid claims—of the Navy and the Army upon the recognition of their countrymen. We all know what brilliant and glorious services they have rendered in the past, and we are confident that if they are called upon in the future the same service will be repeated. It is not every day that I have the opportunity, which I greatly value, of meeting representatives of the Royal Naval Reserve. I appreciate it as a great honour to be invited once more to take the chair at this annual dinner. You have many distinguished members, and many powerful friends of your service to whom you might have turned. For myself, I can only say that I yield to none in strength of conviction that the Royal Naval Reserve can and ought to be made a most powerful auxiliary to the permanent service for the manning of the Navy. Of the ordinary duties of your profession, its usefulness, its difficulties and anxieties, and the skill and courage required to meet the varied exigencies of a sea life, I have had the opportunity of forming an appreciation perhaps in a greater degree than can be possible for landsmen with no personal experiences of the sea.

Necessity of a Reserve

And now I turn to the subject which naturally occupies us most particularly on such an occasion as the present. What can best be done to advance the Royal Naval Reserve, to improve the position of its members, and to render the service more thoroughly efficient as an auxiliary to the permanent Navy? With continuous reinforcement of the Navy in ships the subject is becoming more and more important. It is useless to build ships unless we are prepared to man them. To provide for the entire demands of the manning of the Navy in war by means of the permanent force would involve an enormous expenditure which might be more advantageously applied, and the like of which has never yet been borne by any maritime Power in time of peace. I can conceive of nothing which can so effectually promote the advancement of the Royal Naval Reserve, and the cream of the merchant service from which the Reserve is recruited, as a close connection with the Royal Navy. What we have to do is to establish in the Navy a thorough confidence in the Royal Naval Reserve as the second line of our naval force. We may appropriately ask ourselves this evening whether everything is being done which it is desirable to do to attain this end. I will refer only to the reserve of officers. Under recent regulations much has been done to bind the Royal Naval Reserve and the Royal Navy together. I would refer particularly to the regulations affording an opportunity to the officers of the Reserve to serve a year in the Navy. In my view, this term of service should in future be compulsory. It should at least be insisted upon as a qualification for promotion. In order that a year of service may be put in, without interfering with the career and prospects

A close connection with the Navy desirable of a Reserve officer, it is desirable that he should join the Navy at as early an age as possible.

Recompense to the Reserve officer

The remuneration of the Reserve officer must be sufficiently liberal on the part of the Admiralty. The shipowners should do their part, by giving the preference to Reserve officers in making selections for appointments. When an officer leaves his service in the mercantile marine to do duty in the Navy, his employers should stand ready to restore him to at least as good a position on his return. In this connection the only point which seems open to doubt is whether a year is enough to give the Reserve officer that thorough training in naval duties which we want to secure.

Selection of competent men for the Reserve

There is another question on which I should wish to say a few words. The efficiency of the Reserve depends essentially on the judicious selection of competent men. No profession is more unequal than that to which you belong. The designation "master" covers the widest conceivable range, both of qualifications and of duties. The best men are wanted for the Reserve. We have got a large number of the best. Are the Admiralty in all cases sufficiently exclusive ? It is most difficult to make a judicious selection. The Admiralty are not in close touch with the mercantile marine. They rarely have any personal knowledge of the young officers of the Reserve to whom they give commissions. It is, perhaps, desirable that some more effective guarantee should be given that the appointments are in all cases the best that can be made. It may also be desirable that future appointments to the Reserve should not be confirmed as permanent until officers have served six months in the Navy and have been favourably reported upon. In any case promotion should depend on a favourable report.

I must not detain you longer on this social occasion

Good services of the mercantile marine

with administrative details. I began by expressing my perfect personal confidence in the merchant service as the nursery for an efficient Reserve. I conclude my reference to this subject with a reiteration of the same opinion. Many voyages and journeys by sea have brought me into close contact with the mercantile marine. I have in the profession some of my most valued friends. I have seen the Reserve officers at their work, and I know with what untiring devotion and zeal that work is done. The interchange of commerce and the safe and punctual conveyance of mails and passengers from our island home to the furthest limits of the globe depend on you; and for your splendid and indispensable services your fellow-countrymen, one and all, are glad at all times to acknowledge their deep debt of gratitude.

A professional institution for the merchant service

Before I sit down I should like to allude to one or two other points. It has always seemed to me to be extremely desirable that we should, if possible, establish for the advancement of the mercantile marine, for the discussion of professional subjects, and for the promotion of professional interests, as there has been established in every other profession, some sort of professional institution at which all matters affecting your profession might be discussed, and under the auspices of which joint, effective, and powerful action could from time to time be taken when circumstances required it. There have been some attempts made to establish an institution of that kind. There is one in London, and there is one in Liverpool. I do not wish to speak in disparaging terms of those institutions, but this I do say, that they do not present to my mind that kind of organisation which I have endeavoured to indicate, and which I hope may some day be established and do that good work which I think lies before it.

Facilities offered by the St. George's Club

There is another desideratum of real practical importance which I am glad to know, by the kind assistance of the St. George's Club, and especially by the help given by my friend on my left (Captain Angove), and by the greatly respected and deeply lamented Captain Halpin, we have at last provided for gentlemen connected with the mercantile marine. Here in the St. George's Club you are all welcomed members, and I believe that the facilities which have been offered under the roof of the St. George's Club for the officers of the mercantile marine will be appreciated by them. It is something to have accomplished during the past twelve months, and if in the course of the ensuing twelve months we should see practical and effective steps taken for the constitution of such a professional institution as all other professions have established, and as you ought to establish, then I say that during the next twelve months something very valuable will have been carried out.

XVIII

EDUCATION AND TRAINING FOR THE SEA

SPEECH AT ANNUAL DISTRIBUTION OF PRIZES, SCHOOL SHIP 'CONWAY,' LIVERPOOL, JULY 19, 1894

Pleasure of the sea

IN coming among you to-day I am performing a labour of love. The sea, ships, and sailors have been from my youth onwards subjects of undying interest. In a fine passage that great master of English prose, Mr. Froude, tells us that the flying years had not stolen from him the delight of finding himself once more upon the sea ; the sea which is eternally young, and which gives one back one's own youth and buoyancy. For the young fellows whom we have come here to-day to encourage and cheer on at the outset of their career, we all earnestly wish that they may find, not only a successful, but a happy career upon the breezy ocean. It is a dull imagination which can find nothing but weary monotony in a life afloat. The sea is the most impressive emblem which the great Creator has presented to the contemplation of man of the infinite in power, in space, and in time.

Importance of the profession

I turn from the poetry of the subject to considerations of a more practical character. And, first, I desire to impress the cadets of the 'Conway' with a due sense of the importance and the usefulness of the profession on which they are about to enter. As members of the mercantile marine they will be charged with the duty

Qualities required of a sea officer

of carrying on with safety and despatch that enormous commerce on which the prosperity of our country mainly depends. They will be responsible to the shipowners and the merchants ; but, above all, they will be responsible to the seamen under their command, whose safety, and whose moral and religious tone, will largely depend upon the example and the influence exercised by their officers. Great qualities are needed to adequately discharge such difficult and varied duties. The sea officer requires not only moral but physical courage. He must be brave when face to face with danger. He must be much-enduring when exposed to privation. He must be able to bear long periods of isolation without mental or moral deterioration. He must be a seaman, a navigator, and an engineer. He must possess some knowledge of medicine, surgery, and sanitation. In one of his admirable histories, Captain Mahan pays a deserved tribute to the care bestowed by Jervis, Nelson, and Collingwood upon the health and well-being of their crews.

Education

Having described the ideal sea officer, let us consider his education and training, taking first the scholastic stage, through which the cadets of the 'Conway' are passing. The future sea commander must be instructed at school in mathematics, in physics, in geography, astronomy, pilotage, and naval architecture. A knowledge of foreign languages is particularly desirable. In this regard the officers of other merchant services are generally in advance of our own countrymen.

Seamanship should be learnt in sailing ships

The practice of seamanship can only be learned at sea, and it is highly desirable that the first years afloat should be passed in sailing ships. It is to be regretted that no systematic plan of training has yet been adopted The crude and imperfect arrangements for the all-important training afloat are in strong contrast with the studious care bestowed on the boys of the 'Worcester' and 'Conway.' Under the best conditions the apprentice to the sea must be prepared to face its inevitable labours, hardships, and perils. But more might often be done to mitigate hardship, and certainly more might be done to carry forward the instruction so well begun in the school ships.

Training in 'Hesperus' and 'Harbinger'

It may interest you to know that, a few years ago, I determined to make some personal effort to provide what seemed to be wanted. I purchased a principal share in two ships, the 'Hesperus' and the 'Harbinger,' which are worked in the Australian trade, under the management of Messrs. Devitt & Moore. In each of these ships twenty-four midshipmen are carried. They live in good quarters. A naval instructor is carried, who, under the captain, has charge of the boys. I have received many gratifying letters from parents and guardians, expressing their complete satisfaction with the arrangements made. My only regret is that there are not more ships similarly organised. The explanation is not far to seek. It cannot be made a very paying business. To extend the system adequately a small contribution is required from some public source.

Rewards in the merchant service

And now let us ask ourselves one or two important questions. And first, has the shipowner done all that lies in his power to raise the standard of the nautical profession? In the best mail and passenger services the rewards compare not disadvantageously with the average earnings of other professions. The officers are fully worthy of their fine commands. In tramp steamers and sailing ships the competition for employment necessarily tends to keep down salaries, while the profits of owners are too often reduced to a vanishing point.

Turning to the Board of Trade, its influence in the

Board of Trade certificates

advancement of nautical education must be chiefly exerted through the examinations for certificates. Limited as at present, the qualifying test has been reduced to its most simple expression. When examinations were first instituted they were voluntary, and of a much higher character than those which are now compulsory. It cannot be said that the Board of Trade requirements are insufficient to insure competency in navigation. It may be asserted not less confidently that an intelligent knowledge of principles would tend to develop more fully all the faculties of the mind.

Assistance of the State

In the work of teaching and training seamen the State has done very little in England. The Nautical School at Christ's Hospital was established in 1673, by Charles II. The school at Greenwich was founded forty years later. It has turned out many skilful navigators and accomplished teachers of the art. The school was abolished by the Admiralty in 1860. It has been revived by the liberality of the Drapers' Company, of London.

Greater liberality on the Continent

On the Continent the instruction of the nautical profession has been supported with greater liberality than with us. We should give more instruction in elementary schools at the great seaports in subjects useful as a preliminary to the study of navigation. This elementary instruction should be followed up, as you are following it up in Liverpool, by applying some of the money granted for technical education to the training and instruction of apprentices to the sea.

It is necessary to conclude. It may be that I have not painted a sailor's life in the glowing colours which might have been used. Of this, however, I am confident. For not a few among the cream and flower of our British youth the attractions of the sea will always remain irresistible.

XIX

PROGRESS OF SHIPBUILDING

Opening Address at Summer Meeting of Institution of Naval Architects at Southampton, July 1894

I desire to express regret that my engagements in connection with the Opium Commission in India made it impossible for me to be present at our annual meeting in London in March. I take this opportunity of reviewing the recent progress in shipbuilding in somewhat greater detail than would otherwise have been necessary. I will deal first with the shipbuilding for the Navy.

The Spencer programme

The salient features of the work in course of execution under the Spencer programme may be summarised as follows :—We are building ten battleships of the first class, two first-class and nine second-class cruisers, two sloops, and 36 torpedo-boat destroyers. These vessels are in addition to those completing under the Naval Defence Act.

Great displacement of the new battleships

One striking characteristic of the new battleships is the unprecedented displacement. The size has been considered necessary in order to increase the coal capacity, while retaining the armour protection and armament of their immediate predecessors. If no objection is taken to the dimensions, the new ships represent, and worthily represent, all that can be accomplished in the present state of naval science. While recognising the fighting

Good points of the 'Centurion' and 'Barfleur'

power of the new ships, I desire to speak not less approvingly of the 'Barfleur' and the 'Centurion' as admirable examples of a smaller type of battleship than those we are now building. In speed they show decided superiority over the larger ships; they steam 18·5 as against 17 knots. The supply of coals which can be carried in the bunkers at load draught is 750 tons for the 'Barfleur' and 900 tons for the new ships. With the fullest coal supply which can be carried, the distance which can be steamed at 10 knots would be about the same in both classes. With dimensions sufficiently enlarged to raise the calibre of the minor armament carried on the broadside from 4·7-inch to 6-inch guns, we should have in the 'Barfleur' a type of which it is highly desirable that many specimens should be added to our Navy. The cost of the 'Barfleur' is 616,000*l.*; the cost of the 'Hood' and her consorts may be taken at 915,000*l.* It is for the naval advisers of the Admiralty to appreciate the relative advantages of the increased numbers of the 'Barfleur' type which can be built for any given sum of money as against the superiority in armament and armour which is obtained in ships of more than 14,000 tons.

Increase in size of cruisers

Turning to the cruisers, we have this year advanced to dimensions never previously approached. I see no objection to the recent increase in the size. The cruisers are not exposed to a torpedo attack, which might in certain conditions be extremely formidable to a blockading fleet; while, on the other hand, the extreme speeds which are absolutely necessary to overhaul such ships as are now in progress for foreign Powers cannot be maintained continuously at sea as easily and with the same independence of weather in the smaller as in the larger ships. Coal endurance is an element of fightin efficiency of the first importance to cruisers, and in this regard there is a marked relative gain in the large ships. The 'Powerful' and the 'Terrible' present a new type of sufficient importance to call for a statement of some of the leading particulars. The dimensions are 14,000 tons, the length is 500 feet, the breadth is 71 feet, the mean load draught is 27 feet. The armament consists of two 9·2-ton and twelve 6-inch guns, with 28 smaller quick-firers. The calculated speed with natural draught is 22 knots. The coal supply is 1,500 tons, but provision is made for carrying 3,000 tons. A large proportion of displacement is allotted to armour protection. The 'Powerful' and the 'Terrible' have been suggested by the Russian 'Rurik.' We may compare her leading features with those already given for our own ships. The displacement is 10,900 tons, the length 396 feet, the breadth 67 feet, the draught of water 26 feet; the coal supply with full bunkers is 2,000 tons, the estimated speed is 18 knots. The armament consists of four 8-inch and sixteen 6-inch guns—not, so far as we know, quick-firers. There are six 4·7-inch and 18 smaller quick-firers. A new ship is projected of 12,000 tons, 446 feet long, 70 feet beam, 19 knots speed, and the armament is the same as in the 'Rurik.' The American cruisers are of smaller dimensions than these Russian ships.

'Powerful' and 'Terrible'

Dimensions of 'Rurik'

Our torpedo flotilla

Having adopted the policy of constructing our battleships of the largest dimensions, it has become more than ever necessary to strengthen the torpedo flotilla both in numbers and efficiency. Battleships can only venture to blockade an enemy's port when protected against night attacks by a cloud of vedettes. The torpedo-boat catchers recently produced have shown an extraordinary advance on all former types. The orders from the Admiralty have been distributed amongst several

Mr. J. S. White and his 'turn-about' boats

'Daring' and 'Hornet'

The 'Ferret'

firms. Up to the present date the boats which have undergone trials are from the well-known yards of Messrs. Thorneycroft, Messrs. Yarrow, and Messrs. Laird. Being at Southampton, it is proper to mention that some of the new boats have been entrusted to a firm in this immediate neighbourhood. In referring to Mr. John Samuel White, of East Cowes, it is almost unnecessary to remind you that that gentleman and his father have for several years been largely engaged in providing the Navy with steam and other boats. The firm deserve special honour, as we all know, for the remarkable evolutionary qualities displayed in the type which is appropriately known as the 'turn-about.' Referring to the recent trials, Messrs. Thorneycroft's 'Daring' and Messrs. Yarrow's 'Hornet' are of approximately similar dimensions. The length of the Thorneycroft destroyer is 185 feet, the beam is 19 feet, as against a length of 180 feet in Messrs. Yarrow's vessel with a beam of 18 feet. These new vessels have been designed to overtake torpedo-boats and destroy them by shell fire, and for this purpose a considerably higher speed than that of the first-class torpedo-boat was required. The guaranteed speed is 27 knots, to be maintained during a continuous run of three hours at sea. The boilers are of the improved water-tube type, and capable of raising steam from cold water in fifteen minutes. Messrs. Yarrow are now building for the Russian Government a similar vessel to the 'Hornet,' having a guaranteed speed of 29 knots, and consuming 30 tons of coal during a three hours' run. Messrs. Laird's official trial of the 'Ferret' took place on the Clyde on the 10th inst. The mean speed of six runs at the measured mile was 27·612 knots—the speed of six consecutive half hour -was 27·57. The steering qualities were excellent, an the absence of vibration was remarkable. This achievement of Messrs. Laird is the more noteworthy as that firm are making a new departure in the construction of these small vessels. It is stated that Messrs. Normand, of Havre, the famous rivals to our own builders, have promised to produce for the French Navy boats of a similar type to those which I have been describing, and which are to have a speed of 30 knots. Shipbuilding for the great maritime Powers is essentially competitive, and the rapid progress realised is probably due to this circumstance more than to any other cause. There is nothing to indicate that we have reached the furthest development to which the science of the shipbuilder and the engineer can attain. In view of the constant progress which is being made, it is probably a wise course on the part of the Admiralty to build steadily and from year to year, rather than attempt to provide at once for the possible requirements even of the near future.

Competition in France

Advance of the mercantile marine

Turning to the mercantile marine, I am glad to be able to congratulate the Institution on the continued maintenance of our maritime supremacy, which is largely due to their skill and enterprise. In a general review it is not necessary to quote statistics. Our merchant navy has been advancing at a rate incomparably exceeding that achieved by any maritime rival. The profits have not grown in proportion to the tonnage. Rarely have the returns to shipbuilders and investors in shipping been so unsatisfactory as in recent years. The cause is not far to seek—the fluctuations in the amount of building have borne no relation to the demands for freight.

Sailing ships. Reasons why they should not disappear

I hope I shall not be criticised for wasting the valuable time of members of this Institution if I ask their consideration briefly to these sailing ships, which should not be allowed to disappear. I speak not only under the inspiration of sentiment, but because it seems on the strictest economic grounds desirable that the cheap power of the wind should be utilised under all suitable conditions. For long voyages and for conveyance by sea of the raw materials of industry, and such articles as wheat, the conditions seem essentially suitable for the sailing ship. Professor Biles has prepared a careful statement of the cost of working six sailing ships trading to San Francisco, carrying 3,000 to 3,500 tons dead weight, as compared with a 4,000 tons cargo steamer running to the East through the Canal. The average distance per day covered by the sailing ships was 71 knots. The working expenses averaged ·014*d.* per ton per mile, against ·0175*d.* in the steamer. The working expenses, therefore, of the steamer per ton per mile were 25 per cent. greater than those of the sailing ships. The first cost was 6*l.* 10*s.* against 5*l.* per ton, or 30 per cent. more per ton than the sailing ships.

Large vessels more economical

More economical results are obtainable both in sailing ships and steamers in proportion as the displacement is increased. In the case of steamers the advantages of large displacement have been recognised by the most experienced owners. The well-known firm of Messrs. Brocklebank, of Liverpool, who have so long taken the lead as sailing ship owners, have lately gone into steam. When at Calcutta last winter, I had an opportunity of going over one of their new ships, which, with a consumption of 42 tons daily, steams 10½ knots, and carries 7,200 tons dead weight. The owners of the White Star Line have recently added to their fleet a twin-screw ship which well merits attention for the combination of efficiency and economy. The 'Gothic' is engaged in the New Zealand trade, maintaining an average speed at sea of

14¼ knots on a coal consumption of 75 tons per day. The accommodation for passengers is equal to that of the well-known White Star steamers. The cargo capacity amounts to 2,500 tons of 40 cubic feet. In addition some 65,000 carcases of sheep can be stowed in refrigerating chambers. The same enterprising owners have recently built the 'Ceric' for their American service. This vessel maintains a sea speed of 12 knots, burning 600 tons of coal between New York and Liverpool. She carries 3,730 tons of wheat, 3,792 tons of general cargo, and 820 head of cattle. Two other notable ships, the 'Southwark' and the 'Kensington,' have been constructed by Messrs. Denny & Thompson, of the Clyde, for the Philadelphia trade. The gross tonnage is 8,606 tons. The coal consumed on the voyage across the Atlantic is 900 tons; the sea speed is 14 knots. Excellent accommodation is provided for passengers. The cargo includes 1,892 tons of wheat and 4,353 tons of general cargo.

Cargo capacity of the 'Gothic

'Southwark' and 'Kensington'

The change which is so notable in the composition of our steam fleet in respect to tonnage is equally seen in sailing ships. Professor Biles's investigations show that the number of sailing ships of between 300 and 1,500 tons has steadily decreased from 1889 to 1893, while in the same period the number of sailing ships above 1,500 tons has correspondingly increased. It will be evident that if full cargoes could always be secured, and the facilities of access to ports were everywhere adequate, the larger ships would quickly sweep the smaller off the seas. To sum up, it may be affirmed that on the long voyages to Australia and San Francisco sailing ships still offer considerable advantages over steamers in point of economy. Should the Isthmus of Panama be pierced by a canal, those advantages would no longer be retained. If the sailing fleet disappeared, the best school of train-

Increase of large sailing ships

ing for seamen would be lost, while the career of the sailor would certainly be deprived of much that is interesting and attractive.

Manning of ships. Average number of crew and tonnage per man in ships of British and other nationalities

This remark leads up to the next subject on which I shall venture to offer a few observations. With the able assistance of Professor Biles I have compared the manning of ships under our own flag and under the flags of our most formidable competitors. In the port of Liverpool, in 1892, for ships of 1,500 tons the average number of the crews, excluding the captain, was 26 for British ships, and 20 for Norwegian and Swedish. For ships of 1,000 tons, the average tonnage per man carried was, under the British flag 64 tons, under Norwegian and Swedish flags 70 tons, and under the German flags 63 tons. Taking the sailing ships of all sizes, British ships are distinctly better manned in relation to tonnage than either the German or the Swedish and Norwegian ships. A careful investigation into the manning of steamers gives similar results. When we endeavour to establish some relation between the manning of ships and the safety of life and property many circumstances must be taken into view. It results from Professor Biles's inquiries that the number of men carried in sailing ships generally decreases with the lapse of time—that is to say, that fewer men are carried in any given ship as that ship grows older; on the other hand, the number of men carried by ships of a given size at the same period of their lives shows a tendency to increase. A new ship of 1,200 tons will carry more men to-day than a new ship of the same size did fifteen years ago. A ship of 1,200 tons, fifteen years old, carries a less number of men than she did when new, and a considerably less number than a new ship of 1,200 tons of the present day.

Turning to the subject of losses, and taking the interval between the years 1889 and 1893, the larger ships seem to be lost in smaller proportions, *showing that the increase of size is accompanied by a greater proportional safety.* It cannot be certainly inferred that the large ships are safer than the small ones on account of their size, because, as already stated, the number of large ships is rapidly increasing, while the number of the small ones is decreasing, so that the proportion of large ships that are new must be greater than that of the small ships.

Less number of losses with big ships

It has already been pointed out that the number of men in a new ship is greater than in an old ship of the same tonnage. It seems reasonable to assume that the new ships are less liable to loss than the old, though this point requires further investigation before any definite statement is made. The immunity from loss in the large ships may be due to their newness. It is, however, somewhat surprising that the percentage of losses in the large ships is not more markedly better than in the small ones, as with proper manning one would be disposed to assume that a large ship is much safer than a small ship.

Greater number of men in new than old ships

In the last ten years the United Kingdom has shown a lower percentage of wrecks, on the whole, than any other country, with the exception of the United States, but as a large proportion of their tonnage is carried on rivers and lakes, there should be less losses. The accompanying table is of interest in this connection.

Percentage of wrecks for different countries

1876–91

Average Percentage by Planimeter

United Kingdom	3·117
United States.	2·434
German Empire	3·503
Norway and Sweden, up to 1891 . .	3·233

Average Percentage 1875–84

United Kingdom	3·560
United States	2·310
German Empire	3·715
Norway and Sweden	2·873

Average Percentage 1884–92

United Kingdom	2·621
United States	2·577
German Empire	3·272
Norway and Sweden, up to 1891	3·669

Average percentage of losses

The average percentage of ships lost of all sizes is less in the United States than in any country.

The following comparison is interesting :—

AVERAGE PERCENTAGES FOR THREE YEARS 1891–93

	Under 1,000 tons	1,000–2,000 tons	Above 2.000 tons	All
United Kingdom	1·50	1·46	1·09	1·47
Colonies	1·50	1·97	—	1·26
United States	1·48	·69	—	1·39
Norway	1·87	2·80	—	1·95
Germany	2·36	1·53	3·35	2·19
France	1·41	—	8·5	1·45

The number of ships above 2,000 tons possessed by France in these years is only nine, but she has lost two in that time.

Diminution of losses

On the whole, the Board of Trade returns show a decided diminution in the losses—the tonnage removed from the register of the United Kingdom on account of wrecks fell from 263,000 in 1883 to 163,000 tons in 1892, the figures for the last three years being 200,000, 216,000, and 162,000. We have seen in what marvellous proportions the tonnage of our shipping has advanced. We see in every port splendid examples of what the skill of the members of this Institution and the splendid nterprise of our shipowners can produce, and it is ratifying to know that they can give, not only increased acilities, but greater safety of communication between ation and nation across the seas.

State subsidies

Now I turn to the question of ocean subsidies, and a few ords are called for by the recent discussions at Ottawa. Ve have been able to dispense with the heavy expendiure incurred elsewhere. The general growth of tonage under the British flag is sufficient to show that the ssistance of the State is not greatly needed by the erchant service. When, however, we look away from he main lines of trade to the opening of new routes aid ay often be given with advantage; it is sometimes dispensable. As an example, I may refer to a proosal now being pressed on the Government for subidies to a service between Vancouver and Australasia. imely help is much wanted. The desire for the mainenance of a united Empire, which has lately been own at Ottawa, is a happy sign of the times. There n be no nobler aim for British and Colonial statesmen. s a practical means of attaining that great object othing can be so effective as accelerated postal comunication.

Aid to the Pacific route

Yachts and yachting

The pleasure fleet should not be wholly omitted in a eneral notice of the work in progress or recently comleted in our shipbuilding yards. We cannot forget hat we are meeting in the headquarters of the yachting raternity. In the present year we have not seen that reat cutter, the 'Meteor,' sailed in former years in our wn waters with such truly sportsmanlike spirit by the erman Emperor. The 'Britannia,' however, built by he Prince of Wales equally with a desire to promote a ational sport, the 'Valkyrie,' and the 'Satanita' have een contending in many exciting matches. During the last few weeks the famous American champion, the 'Vigilant,' has entered the lists. The 'Valkyrie' has met with a regretted disaster, but the 'Britannia' has succeeded in scoring numerous victories. For the first time since the arrival in this country in 1851 of the famous 'America,' our British designers and yachtsmen have been able to produce a champion which has shown equality of merit with the American centreboard type. The power of sailing, and especially of beating, into the wind's eye which have recently been exhibited, are truly remarkable. I know that I am expressing the general sense of the members of this Institution when I say that Mr. Gould, the owner of the 'Vigilant,' is most warmly welcomed in this country. The two great branches of the Anglo-Saxon family are drawing year by year more closely together. We may hereafter see ourselves associated in some great defensive alliance whereby our own security and the peace of the world may be more fully assured. In the meantime these international contests between Yale and our own Universities, and between the 'Vigilant' and the 'Britannia,' while affording delight to multitudes of spectators and a still wider circle of deeply interested readers of their achievements, are fulfilling a great international purpose. They are drawing us and our kin beyond the seas closer together.

The 'Britannia' and 'Vigilant'

Effect of these international competitions

APPENDIX

This and following Tables were prepared by Professor Biles and his Staff under general directions from Lord Brassey

TABLE SHOWING AVERAGE NUMBER OF MEN CARRIED IN CERTAIN GROUPS OF BRITISH SAILING SHIPS

From particulars given in Board of Trade Returns: viz. year 1883, Table 24; 1887, Table 27; 1890, Table 27; 1893, Table 28

Year	300–400 tons			400–500 tons			500–700 tons			700–900 tons			900–1,200 tons			Over 1,200 tons		
	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew
1870	362	12	**12**	428	14·75	**15·75**	611·3	15·3	**14**	801·8	19·7	**19·1**	1,061	26·5	**25·1**	1,400	28	**27**
1880	362	11·7	**11·7**	428	12·5	**12·25**	611·3	14·3	**14**	801·8	19·1	**18·1**	1,061	23·8	**22·36**	1,400	27·7	**26·4**
	Below 700 tons			700–900 tons			900–1,200 tons			1,200–1,400 tons			Over 1,400 tons					
	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew			
1875	602·6	18·6	**16·6**	800	21·6	**20·2**	1,099	29·6	**28·1**	1,276	28	**27·6**	1,590	41·1	**37·1**			
1885	602·6	15·2	**14·8**	800	17·6	**17·1**	1,099	26·3	**25**	1,276	24·6	**24·6**	1,590	37	**32·5**			
	300–700 tons			700–1,000 tons			1,000–1,200 tons			1,200–1,400 tons			1,400–1,600 tons			Over 1,600 tons		
	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew
1877	532	14	**13·7**	832	21	**19·6**	1,118	33·2	**29·3**	1,297	30	**28·5**	1,448	33·5	**31·7**	1,704	31·8	**31·4**
1887	532	12·5	**12·5**	832	18·6	**17·6**	1,118	26·4	**24·8**	1,297	26·5	**25**	1,448	27·7	**27·5**	1,704	29·6	**29·4**
	200–400 tons			400–600 tons			600–1,000 tons			1,000–1,200 tons			1,200–1,400 tons			Over 1,400 tons		
	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew	Mean Tonnage	Total Men	No. of Crew
1880	256·2	10·2	**10**	541	16·5	**15·8**	824·2	22·4	**21·2**	1,100	31·25	**27·5**	1,266	28·2	**28·2**	1,679	43·4	**37**
1890	256·2	9·5	**9·2**	541	14·5	**14·5**	824·2	20·2	**19·4**	1,100	21·75	**21·7**	1,266	24·2	**24·2**	1,679	39	**32·8**

NOTE.—In each group the same identical ships are taken at an interval of ten years.
Figures in ordinary type refer to total number of men carried, excluding captain.
Figures in black type refer to number of crew, excluding captain.
Under the heading of crews are included: mates, midshipmen, boatswains, quartermasters, carpenters, sailmakers, able seamen, ordinary seamen, apprentices, boys, and for ships under 1,000 tons one other person; for ships over 1,000 tons, two other persons.

TONNAGE AND CREWS OF BRITISH SAILING SHIPS

PORT OF LIVERPOOL—YEAR 1892

Under 200 tons							
Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
156	8	156	8	182	8	115	6
168	7	182	8	73	5	59	4
177	7	107	7	194	7	187	9
98	5	93	4	190	8	90	5
182	8	184	8	84	4	97	5
110	5	19	3	59	4	182	7
165	7	59	5	111	6	182	6
153	6	73	5	73	5	170	7
99	5	163	6	92	5	119	5
184	9	159	6	95	5	36	3
179	7	178	7	59	4	—	—
99	6	180	8	116	6	—	—
177	7	168	7	172	7	—	—
59	5	148	5	182	6	—	—
86	6	196	8	94	4	—	—
89	5	118	5	148	6	—	—
73	5	59	4	199	9	—	—
159	6	182	8	179	7	—	—
58	5	73	5	170	7	—	—
165	7	138	5	149	6	—	—
146	8	59	4	45	3	—	—
178	7	133	6	148	7	—	—
180	8	73	5	96	5	—	—
97	7	92	5	68	4	—	—
99	5	95	6				
59	4	62	5	6,353	303	4,386	210
200-300 tons							
243	8	249	10	246	10	220	8
261	8	294	9	296	11	296	12
286	9	297	8	210	9	297	9
293	9	286	9	209	7	210	9
253	10	278	9	215	9	215	9
248	9	293	9	219	8	219	10
220	8	248	9	255	9	255	8

TONNAGE AND CREWS, &c.—*oontinued*

ıwards		Outwards		Inwards		Outwards	
ı	Men	Tons	Men	Tons	Men	Tons	Men
		200-300 tons—*continued*					
5	7	235	7	215	9	246	9
4	9	204	9	299	10	248	9
)	10	260	10	248	10	296	8
9	9	215	9	296	8	—	—
1	7	299	10	5,731	203	5,660	199
		300-400 tons					
7	11	387	11	358	14	329	9
2	9	302	12	398	12	310	11
4	10	302	10	346	10	302	12
2	10	303	10	310	12	323	15
)	11	350	11	399	11	—	—
3	10	372	10	346	10	—	—
4	10	363	10	351	11	—	—
)	10	324	10	5,199	161	3,967	131
		400-500 tons					
1	13	491	13	420	9	499	14
9	10	499	10	448	11	498	12
9	14	499	14	498	11	498	11
)	12	499	12	498	10	—	—
1	9	421	10	415	9	—	—
9	10	420	9	5,187	118	4,324	105
		500-750 tons					
)	16	609	10	713	19	586	13
7	11	670	17	658	18	540	11
2	15	747	12	740	14	595	13
9	10	697	15	652	16	725	17
3	17	638	14	586	13	699	10
6	16	692	15	555	12	590	15
6	14	747	15	684	17	749	18
5	17	718	17	594	11	744	20
)	13	561	16	672	17	691	18
4	18	553	15	724	16	677	17
1	13	716	19	513	14	730	19
0	14	736	14	634	16	638	15
8	11	708	16	642	12	717	21
9	14	658	17	596	17	740	15

TONNAGE AND CREWS, &c.—*continued*

500–750 tons—*continued*

Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
721	15	594	15	—	—	699	10
569	13	652	15	—	—	719	14
593	16	586	13	—	—	586	13
572	16	555	12	—	—	598	14
670	19	684	17	—	—	721	15
741	13	594	11	—	—	593	16
528	17	724	16	—	—	741	15
739	12	718	16	—	—	739	13
586	13	634	16	—	—	719	16
717	20	595	15	—	—	696	16
—	—	599	17	—	—	731	19
—	—	663	11	25,014	565	34,011	779

750–1,000 tons

Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
830	16	764	18	941	14	941	14
989	18	830	18	978	18	878	17
802	16	786	20	863	12	797	17
976	15	802	19	797	14	899	19
941	14	778	13	875	16	812	17
960	29	941	14	899	13	884	15
773	18	949	15	812	14	797	16
849	20	811	19	797	16	874	16
969	18	770	16	896	20	893	17
794	16	949	14	874	16	958	15
929	16	940	13	893	17	799	12
752	17	794	19	958	14	761	17
929	21	929	18	799	12	761	17
794	14	752	12	764	19	880	20
799	15	794	16	761	16	786	18
944	16	832	16	880	17	924	20
799	15	799	16	835	17	887	19
769	12	944	19	786	16	994	13
956	14	799	16	994	14	832	16
993	13	769	12	862	20	799	16
768	14	993	15	832	14	794	16
978	16	768	18	799	16	799	16
778	11	778	13	794	16	786	13
767	16	767	18	833	18	907	22
793	18	793	19	966	13	833	18

TONNAGE AND CREWS, &c.—*continued*

750–1,000 tons—*continued*

rds	Outwards		Inwards		Outwards	
Men	Tons	Men	Tons	Men	Tons	Men
16	807	15	—	—	954	14
17	980	19	—	—	753	17
17	794	17				
—	978	21	45,830	850	47,372	925
			1,000–1,500 tons			
24	1,137	23	1,328	17	1,463	25
23	1,113	20	1,048	13	1,197	21
27	1,467	21	1,440	27	1,112	26
23	1,435	29	1,334	23	1,042	19
23	1,498	20	1,187	11	1,397	31
22	1,361	25	1,392	17	1,408	25
20	1,386	17	1,172	23	1,022	19
17	1,246	18	1,409	20	1,399	24
21	1,312	25	1,284	21	1,038	24
20	1,337	22	1,026	12	1,063	15
23	1,450	25	1,012	14	1,292	21
16	1,158	34	1,179	23	1,461	23
21	1,047	25	1,391	20	1,327	20
28	1,249	20	1,185	17	1,083	19
19	1,054	20	1,346	20	1,349	24
24	1,072	18	1,311	18	1,328	19
20	1.165	19	1,456	20	1,219	34
24	1.245	25	1.184	17	1,055	20
22	1,317	24	1,189	23	1,263	26
22	1,066	20	1,070	20	1.370	23
15	1,154	22	1,237	17	1,236	21
19	1,023	21	1,399	20	1,373	22
12	1,376	18	1,291	19	1,440	26
22	1,198	30	1,233	14	1.490	23
14	1,356	29	1,123	15	1,172	23
17	1,257	21	1.125	17	1,234	24
21	1,457	25	1,457	20	1,026	21
14	1,043	15	1,075	31	1,012	14
21	1,168	22	1,175	18	1,046	20
21	1,479	26	1,363	19	1,429	28
20	1,291	19	1,055	14	1,163	20
19	1,197	24	1,049	14	1,076	23
15	1,443	29	1,136	18	1,474	28

TONNAGE AND CREWS, &c.—*continued*

1,000-1,500 tons—*continued*

Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
1,481	26	1.268	20	1,397	28	1,481	28
1,443	22	1,391	25	1,400	18	1,407	28
1,399	24	1,185	17	1.399	19	1,263	17
1,099	17	1,346	21	1.418	24	1,308	25
1,373	18	1.230	24	1,327	21	1,296	25
1,221	15	1,311	17	1,193	14	1,309	22
1,465	27	1,456	20	—	—	1,221	15
1,435	27	1,189	26	—	—	1,049	14
1,040	19	1,237	17	—	—	1.151	24
1,124	21	1,399	20	—	—	1,435	32
1,295	20	1,123	18	—	—	1,289	22
1,105	16	1,125	17	—	—	1.428	24
1,462	20	1,248	26	—	—	1,404	18
1,480	29	1,345	24	—	—	1,359	23
1,403	19	1.075	28	—	—	1.154	21
1,289	18	1,055	15				
1,164	15	1.200	22	112,286	1,758	123,743	2,197
			1,500-2,000 tons				
1,797	37	1,842	28	1,684	31	1,934	28
1,943	30	1.521	24	1,774	20	1,666	40
1,809	23	1,727	18	1,653	40	1,624	28
1,743	26	1,573	23	1,578	20	1,598	38
1,696	22	1,577	32	1,674	19	1,597	27
1,608	30	1,919	23	1,550	30	1,942	32
1,965	28	1.820	28	1,578	28	1,667	28
1,640	28	1,545	25	1,548	26	1,799	29
1,990	26	1.775	22	1,623	26	1,684	32
1,788	17	1,804	28	1,596	31	1,728	24
1,558	28	1,809	30	1.991	22	1,774	23
1,673	25	1,743	26	1,625	25	1,653	26
1,666	40	1,614	28	1,618	35	1,674	22
1,769	15	1,702	29	1,668	30	1,548	26
1,624	22	1,696	32	1,602	17	1,835	29
1,598	28	1,880	28	1,798	28	1,592	26
1,779	30	1,611	30	1,648	22	1,623	26
1,532	28	1,965	30	1,680	21	1,692	28
1,667	15	1,788	32	1,957	24	1,991	30
1,799	19	1,783	26	1,730	29	1,602	17

TONNAGE AND CREWS. &c.—*continued*

1,500-2,000 tons—*continued*							
Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
1,529	21	1,551	22	1,577	27	1,614	20
1,952	23	1,559	26	1,962	30	1,739	29
1,754	18	1,957	22	1,686	20	1,885	24
1,673	25	1,796	32	—	—	1,612	27
1,612	24	1,529	23	—	—	1,730	17
1,923	29	1,799	33	83,887	1,258	87,688	1,376
Over 2,000 tons							
2,148	19	2,461	32	—	—	2,198	35
2,345	23	2,517	35	—	—	2,561	38
2,050	30	2,148	32	—	—	2,358	32
2,586	36	2,268	37	—	—	2.153	30
2,374	34	2,193	33	—	—	2,281	30
2,415	35	2.038	24	—	—	2,467	34
2,873	34	2,986	36	—	—	2,127	33
2,381	36	2,270	34	—	—	2,062	33
2,075	32	2,166	30	—	—	3,163	29
2,358	31	2,220	32	—	—	2,074	32
2,163	27	2,157	31	—	—	2,203	39
2,043	26	2,107	31	—	—	2,286	30
2,467	34	2,586	36	—	—	2,089	31
2,127	30	2,305	34	—	—	2,463	30
2,599	28	2,374	34	—	—	2,265	30
2,399	31	2.947	42	—	—	2,355	31
2,355	20	2,415	34	—	—	2,603	32
2,636	33	2,873	36	—	—	2,398	35
2,239	22	2,381	36	—	—	2,929	39
—	—	2.449	12				
—	--	2,723	40	44,633	561	95,619	1,314

SUMMARY OF AVERAGES. BRITISH SAILING SHIPS. PORT OF LIVERPOOL, 1892

No.	Ships	Number of Entries		Average Tonnage		Average Number of Crew excluding Captain		Average Tonnage per Man	
		Inwards	Outwards	Inwards	Outwards	Inwards	Outwards	Inwards	Outwards
68	Under 200 tons .	50	56	127·06	121·83	6·06	5·83	20·96	20·89
29	200–300 tons . .	23	22	249·17	257·27	8·81	9·04	28·28	28·45
23	300–400 tons . .	15	12	346·60	330·58	10·73	10·91	32·30	30·30
13	400–500 tons . .	11	9	471·54	480·44	10·72	11·66	43·98	41·20
65	500–750 tons . .	38	51	658·26	666·88	14·86	15·27	44·29	43·67
76	750–1,000 tons. .	53	56	864·71	845·92	16·03	16·51	53·94	51·23
145	1,000–1,500 tons .	89	98	1261·64	1262·68	19·75	22·41	63·88	56·34
79	1,500–2,000 tons .	49	51	1712·0	1719·37	25·67	27·0	66·69	63·67
49	Over 2,000 tons .	19	40	2349·10	2390·47	29·52	32·85	79·57	72·76
547									

NORWEGIAN AND SWEDISH SAILING SHIPS

PORT OF LIVERPOOL, 1892

Under 200 tons						
rds	Outwards		Inwards		Outwards	
Men	Tons	Men	Tons	Men	Tons	Men
6	96	6	181	7	181	7
6	159	6	198	7	165	7
7	195	8	98	6	69	4
8	158	6	69	4	112	7
7	168	7	112	7	174	7
6	129	6	120	6	128	6
6	153	6	147	7	167	5
4	158	7	155	7	147	7
6	163	9	—	—	197	8
7	147	6	2,546	114	2,866	125
		200–300 tons				
7	248	8	267	8	267	9
8	299	9	254	8	269	9
9	237	8	209	6	201	7
9	251	10	206	7	281	8
7	286	9	263	9	267	8
7	295	9	213	7	209	6
12	272	8	286	7	263	9
8	258	9	299	9	286	8
9	247	9	252	8	299	9
8	226	7	226	8	206	7
8	281	9	279	8	213	7
7	248	9	—	—	253	8
7	251	8	—	—	252	8
8	235	7	—	—	263	9
7	263	9	—	—	236	8
9	271	8	—	—	261	8
9	244	7	—	—	245	8
9	246	9				
8	286	9	7,617	241	9,215	297
		300–400 tons				
10	349	11	332	10	364	8
8	341	10	383	10	334	10

NORWEGIAN AND SWEDISH SAILING SHIPS—*continued*

300–400 tons—*continued*

Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
324	10	332	10	341	9	364	10
341	9	384	10	381	10	341	9
376	10	383	10	348	10	368	10
372	10	341	9	364	10	305	8
398	10	376	10	330	9	389	10
365	10	392	10	390	10	381	10
336	9	331	9	318	10	349	11
338	8	383	14	349	11	370	9
382	14	343	10	370	9	390	10
311	9	398	10	334	9	318	10
307	9	338	8	360	10	348	10
340	9	307	9	357	10	360	10
364	10	311	9	327	10	334	9
376	14	341	9	398	10	357	10
324	9	364	10	360	10	330	9
332	9	324	9	319	10	327	10
357	10	357	10	345	10	316	9
396	10	341	8	364	10	319	10
341	9	341	9	329	9	399	10
388	9	396	10	334	9	360	10
341	10	364	10	344	14	364	10
327	10	388	9	314	10	329	9
349	10	341	10	—	—	345	10
374	10	332	9	—	—	339	14
368	10	323	10	—	—	313	10
305	8	374	10	—	—	341	8
389	10	349	10	18,660	522	19,988	545

400–500 tons

485	12	439	10	472	10	418	10
430	10	487	12	438	11	438	11
403	11	448	10	428	11	464	10
458	10	403	11	421	10	472	10
464	10	485	12	459	11	420	10
427	10	490	18	473	11	459	11
494	11	458	10	440	9	428	11
497	11	494	11	464	11	432	12
418	10	427	10	490	11	474	11
420	10	497	12	447	10	473	11

NORWEGIAN AND SWEDISH SAILING SHIPS—*continued*

400–500 tons—*continued*							
Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
480	10	440	9	400	10	442	11
470	12	464	11	488	11	405	10
456	11	443	14	406	9	411	10
435	10	448	12	476	10	401	10
472	9	490	11	493	11	430	10
436	10	470	13	440	8	400	10
465	11	435	10	489	11	423	10
464	9	456	11	405	10	406	9
405	10	465	11	489	11	488	11
428	11	436	10	439	9	493	13
482	12	472	9	458	11	440	8
401	10	428	11	458	11	406	10
405	10	425	10	446	10	439	10
411	10	464	9	—	—	458	11
430	10	482	12	21,555	497	21,967	529
500–750 tons							
600	11	585	13	560	10	749	11
667	12	664	13	576	12	620	11
577	11	632	12	614	11	549	12
593	11	510	12	521	10	665	12
604	13	743	11	628	12	560	10
657	14	699	13	537	11	576	12
519	12	612	12	512	12	528	11
551	12	641	12	563	11	614	11
513	11	667	12	729	12	521	10
570	12	577	11	540	11	703	14
558	13	513	11	600	12	562	12
620	11	727	12	694	13	563	12
504	11	593	11	581	12	628	12
580	12	558	13	519	12	512	12
523	11	570	12	630	11	543	11
583	12	604	12	551	13	594	12
640	12	508	11	735	12	540	11
508	12	504	11	595	12	729	12
549	12	519	12	561	8	695	13
528	11	523	11	508	12	600	12
657	14	583	12	742	13	581	12
749	11	580	12	598	12	613	12

NORWEGIAN AND SWEDISH SAILING SHIPS—*continued*

500–750 tons—*continued*							
Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
639	14	508	12	561	13	652	12
632	12	561	10	517	11	535	12
515	11	735	12	585	12	562	12
681	13	595	12	670	12	538	12
583	11	519	12	714	13	628	10
642	12	551	13	543	11	543	11
506	10	600	12	593	12	576	12
555	11	748	10	669	12	562	12
622	13	632	12	587	12	670	12
517	12	742	14	657	14	517	11
603	12	515	11	515	12	517	12
564	12	642	12	613	12	543	11
652	12	598	12	711	13	593	12
553	11	681	13	735	13	585	12
538	12	555	11	601	12	669	13
558	12	537	11	680	12	515	12
535	12	652	13	673	13	587	12
628	10	583	11	600	12	714	13
575	13	564	12	—	—	694	12
562	12	603	12	—	—	735	12
543	11	558	12	—	—	612	12
701	12	553	10	50,072	996	52,136	1,026
750–1,000 tons							
866	14	784	14	915	16	794	14
839	14	895	13	796	13	961	15
826	15	866	14	789	11	915	16
788	14	839	14	799	10	889	14
790	14	816	13	871	15	863	14
867	14	788	14	779	13	957	16
996	17	826	15	972	13	789	13
759	14	839	14	969	15	871	14
759	13	790	14	955	15	969	15
854	15	759	14	797	14	955	15
792	14	996	17	998	16	843	14
888	13	759	16	892	15	797	14
806	12	854	15	750	14	940	15
794	14	806	12	843	14	950	16
961	15	792	14	975	14	843	14

Norwegian and Swedish Sailing Ships—*continued*

750–1,000 tons—*continued*							
Inwards		Outwards		Inwards		Outwards	
Tons	Men	Tons	Men	Tons	Men	Tons	Men
794	14	892	15	863	14	835	14
931	16	956	14	829	14	829	14
875	16	750	14	760	12	760	12
757	13	794	14	759	14	—	—
878	16	875	16	796	14	—	—
967	15	881	14	889	14	—	—
881	14	925	15	764	14	—	—
984	13	757	12				
855	13	934	13	39,267	646	35,933	599
1,000–1,500 tons							
1,090	17	1,295	19	1,247	18	1,159	17
1,296	17	1,117	16	1,192	17	1,017	15
1,388	17	1,106	18	1,026	15	1,141	18
1,090	16	1,049	17	1,201	16	1,433	20
1,154	16	1,315	17	1,228	16	1,168	17
1,183	19	1,064	17	1,167	17	1,387	18
1,467	19	1,388	17	1,053	17	1,287	18
1,201	16	1,264	18	1,265	18	1,201	16
1,228	18	1,154	16	1,302	18	1,026	15
1,216	16	1,182	18	1,040	16	1,228	16
1,167	17	1,222	18	1,274	19	1,167	17
1,295	18	1,467	19	1,182	16	1,031	17
1,066	18	1,228	18	1,165	19	1,302	18
1,017	16	1,201	16	1,064	16	1,373	20
1,089	16	1,216	17	1,173	17	1,274	18
1,159	17	1,051	14	1,332	18	1,040	16
1,141	17	1,295	18	1,152	17	1,165	19
1,433	18	1,066	18	1,127	16	1,064	16
1,387	18	1,320	17				
1,168	17	1,090	16	45,425	649	45,553	655
1,500–1,600 tons							
1,564	20	—	—				
1,900–2,000 tons				Over 2,000 tons			
1,985	26	—	—	2,308	30	2,308	30

AVERAGES. NORWEGIAN AND SWEDISH SHIPS. LIVERPOOL, 1892

Ships	Number of Entries		Average Tonnage (T)		Average Crew (C)		Tons per Man $\left(\frac{T}{C}\right)$	
	Inwards	Outwards	Inwards	Outwards	Inwards	Outwards	Inwards	Outwards
Under 200 tons . .	18	19	141·4	150·8	6·3	6·5	22·4	23·2
200–300 tons . .	30	36	253·8	256	8·03	8·2	31 6	31·2
300–400 tons . .	53	57	352	350·6	9·8	9·5	36	36·9
400–500 tons . .	48	49	449	448·3	10·3	10·8	43·5	41·5
500–750 tons . .	84	87	596	599·2	11·8	11·7	50·5	51·2
750–1,000 tons . .	46	42	853 6	855·5	14·01	14·2	60·8	60·2
1,000–1,500 tons . .	38	38	1195·4	1198·7	17 08	17 2	69·9	69·6
1,500–1,600 tons . .	1	—	1,564	—	20	—	78·2	—
1,900–2,000 tons . .	1	—	1,985	—	26	—	76·3	—
Over 2,000 tons . .	1	1	2,308	2,308	30	30	76·6	76·6

IAN SAILING SHIPS. PORT OF LIVERPOOL, YEAR 1892

Under 200 tons		
wards	Outwards	
Men	Tons	Men
6	134	5
5	174	6
200–300 tons		
12	280	9
9	275	9
9	—	—
7	—	—
300–400 tons		
9	384	10
10	391	10
9	334	9
11	352	9
10	321	9
—	397	11
400–500 tons		
11	445	11
11	469	12
11	423	12
9	485	12
10	496	11
10	419	11
—	436	11
—	470	11
—	494	12
—	419	11
—	411	9
—	436	10

500–750 tons			
Inwards		Outwards	
Tons	Men	Tons	Men
563	9	677	15
533	14	532	12
620	14	691	15
668	14	563	9
504	16	533	14
724	13	504	13
—	—	619	14
—	—	522	12
—	—	668	14
—	—	724	13
—	—	542	15
—	—	571	12
750–1,000 tons			
841	17	841	17
841	16	842	16
997	18	841	17
764	14	764	14
—	—	956	15
1,000–1,500 tons			
1,224	18	1,240	21
1,120	17	1,427	20
1,058	17	1,033	16
—	—	1,040	17
—	—	1,281	25
—	—	1,089	20
—	—	1,249	19
—	—	1,224	18
1,500–2,000 tons			
1,695	23	1,695	23
1,655	24	—	—

AVERAGES. GERMAN SAILING SHIPS. LIVERPOOL, 1892

	Total Number of Ships (Inwards and Outwards)	Average Tonnage	Average Crew	Tons per Man
Under 200 tons .	4	150·25	5·50	27·31
200–300 tons .	6	259	9·16	28·27
300–400 tons .	11	356·27	9·72	36·65
400–500 tons .	18	443	10·83	40·90
500–750 tons .	18	597·66	13·22	45·20
750–1,000 tons .	9	854·11	16	53·38
1,000–1,500 tons .	11	1180·45	18·9	62·45
1,500–2,000 tons .	3	1681·66	23·33	72·08

TABLE OF PERCENTAGES OF SAILING AND STEAM SHIPS LOST BY ABANDONMENT, FOUNDERING, AND MISSING

Vessels under 100 tons excluded	Under 1,000 tons		1,000-1,999 tons		Over 2,000 tons	
1891–93	Average Percentage Lost of Number Owned		Average Percentage Lost of Number Owned		Average Percentage Lost of Number Owned	
	Sail	Steam	Sail	Steam	Sail	Steam
United Kingdom .	1·51	·32	1·46	·45	1·14	·26
British Colonies .	1·15	·10	1·96	·29	—	·74
Foreign Countries (as per list below[1]) . . .	1·36	·15	1·54	·46	2·20	·09

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[1] Foreign countries included: America, Austro-Hungary, Denmark, Holland, France, Germany, Italy, Norway, Sweden, Spain.

PART II

NAVIGATION ETC.

I

THE EXAMINATION OF ADJUSTERS OF COMPASSES

PAPER READ AT THE INSTITUTION OF NAVAL ARCHITECTS
MARCH 31, 1871

I SHOULD be guilty of presumption if I were to bring before this Association original views and suggestions of my own upon the highly difficult and important question of compass adjustment. Speaking on this subject as an amateur sailor, my object is to befriend, as far as I can, our seafaring population, a class for whom I have ever felt a most hearty sympathy. I need scarcely remind the Institution of Naval Architects that cases of total loss or partial damage to shipping from the local attraction or defects in their compasses are not unfrequent; and that cases are continually occurring in which, from the same cause, the greatest danger is incurred. No skilful navigator, as I am well aware, will neglect the duty of perpetually testing, when at sea, the accuracy of his compasses by azimuths and other astronomical observations; but the difficulty with which we have to deal arises from the impossibility of testing compass errors in

Loss or damage from defective compasses

the cloudy and thick weather which so frequently prevails in our own latitudes.

Board of Trade requirements

To provide the navigator, as far as possible, with the best means of safely navigating an iron ship until he has had an opportunity of making an independent verification of the errors of his compass, the Board of Trade requires that the compasses of all iron ships shall be properly adjusted before they proceed to sea. With strange inconsistency, however, they have hitherto accepted as evidence that that adjustment has been properly made the certificates of persons for whose competency to undertake a very difficult and important task they have no guarantee.

Opinion of the Royal Society

In the year 1865 the Royal Society entered into an interesting and valuable correspondence on this subject with the Board of Trade. The Royal Society stated that an organised department of skilful men, under able supervision, would probably be of much advantage, not merely in laying down rules, but in giving advice and suggestions to naval constructors, compass makers and adjusters, and in producing a uniform system of adjustment. In support of their recommendation, they pointed to the fact that almost all the advances which have hitherto been made in the science, and which have placed England at the head of the science, are due to there having been for the last twenty-five years one officer, appointed by the Admiralty, to attend to this duty almost exclusively.

Admiralty Report to Board of Trade

In September, 1865, the Admiralty, at the instance of the Royal Society, addressed a communication to the Board of Trade on this subject. They pointed out that in the mercantile marine there is no guarantee for the competency of the adjuster, and that regulations for the adjustment of their compasses are thereby rendered in many cases inoperative, or nearly so. They admit that by constant practice, but without any very clear knowledge of the principles of magnetism, several skilful adjusters of compasses are to be found at some of the great mercantile ports ; but they declare that no system can be expected to be satisfactory which does not gradually develop itself under proper supervision. Notwithstanding this concurrence on the part of the authorities at the Admiralty in the views originally put forth by the Royal Society, the Board of Trade declined to accept the recommendation which had been made.

Opinion of Astronomer Royal and others

I have made inquiry on the subject, and have reason to believe that no change has taken place in the views represented to the Board of Trade in 1865, both by the Royal Society and by the authorities at the Admiralty. A similar opinion is entertained by the Astronomer Royal, who informs me that he assents most strongly to the requirements that, as a condition of seaworthiness, the adjustment of compasses shall be carried out by a certified adjuster. 'A condition equivalent to this,' he says, 'was urged by me on the Admiralty in 1839. All people who have at later times entered carefully into the matter have expressed the same opinion. I may cite particularly Captain Evans, Mr. Rundell, and Mr. Towson, the examiner of the local Marine Board of Liverpool.' I have consulted the Committee of Lloyd's and the Committee of the Liverpool Shipowners' Association. Both of these associations are in favour of requiring that all adjusters of compasses shall possess a certificate of competency.

Such being the views entertained by men of science, by shipowners, and by insurance associations, I will now turn to one of the most interesting communications which I have received on this matter ; interesting, because it comes from a highly distinguished officer of the mercantile marine, whose practical experience of the difficulties of navigating iron ships gives the greatest possible weight to the opinion which he expresses.

Letter from Sir James Anderson

In a letter from Sir James Anderson, he says :—

'The compass is of all other essentials the most important part in the equipment of an iron vessel. It is of all others the least understood, either by those who build ships, sail ships, or make the compasses that are used in the mercantile marine. You will of course understand me at once as admitting that there are exceptions to all those cases. A very little attention to the books published by Captain Evans of the Hydrographical Department will illustrate what I mean as to the importance to be attached to the position in which the ship is built.

Laws of magnetism affecting ships and compasses, present ignorance of

'It will also be admitted that magnetism has only recently become a well-defined science, and the majority of those now employed in commanding the ships of the mercantile marine cannot be expected to be thoroughly conversant with all its laws, which so far have only engaged the attention of a very few of the clear intellects of the scientific world. My opinion is that there are not fifty officers now afloat, either in the Royal Navy or the mercantile marine, who are conversant with the laws of magnetism, as affecting ships and compasses, as they should be understood. The rising generation of officers no doubt will become more proficient in the science; but it has required the special knowledge and great application of Captain Evans, with all the opportunities that the Royal and private building yards of this country have afforded, to reduce it to well-defined principles, and those principles still require *an expert to apply them.*

'The greater number of casualties to iron ships may be traced, in my judgment, to errors of the compass and lee-way. When you reflect that a quarter of a point will cause about 2½ miles of error upon a hundred miles of distance run, and that after the usual observations about noon, or even during the afternoon, the steamers of the present day may easily run a distance of 200 miles before there is an opportunity of obtaining another observation, this would give an error of five miles in a ship's position. Or with an eighth of a point, which is still smaller, and a degree of accuracy no one can pretend to arrive at in steering, you may be 2½ miles out, and in approaching a coast at right angles, or nearly so, such as Cape Race, in the voyage to America, or the coast of Ireland coming from America, you will see at once how important it is that the compass should be made as reliable as possible —an error of even 2½ miles is just as fatal as twenty miles.

Effect of errors in the compass

'I do affirm that neither in Liverpool nor London, so far as I have ever seen, is there a compass adjuster who can pretend to more than a merely mechanical knowledge of the compass, with a minimum of the knowledge of the science of magnetism as applied to it. In Liverpool, especially, the facilities for adjusting ships' compasses are meagre and unsatisfactory. I have very seldom during all my experience had an opportunity of getting my ship removed any reasonable distance from the influence of either iron ships, or iron pillars supporting the dock sheds, or iron lighters alongside the ship.

Insufficient knowledge of adjusters of compasses

'For my part, I used to fear the adjustment of compasses by some of the men employed, and preferred trusting to such azimuths as I could obtain at sea, always keeping at the same time the errors of the compass given me by the compass adjuster, but as a rule leaning

Anxiety thrown on captains

to my own azimuths. These azimuths, however, are of little value unless obtained in considerable numbers—the rolling of a screw steamer, or the careening over under canvas, frequently making considerable discrepancies in observation upon the same point of the compass. I need scarcely point out to you how much anxiety this throws upon the captains navigating those fast steamers. There can be no reason for objecting to a law which shall require that all compass adjusters at the seaports shall be men who have passed a strict examination, and that they must be properly certified by the Compass Department of the Admiralty.

Great knowledge of Captain Evans and Admiralty Hydrographic Staff

'I had a good deal of experience of this department during my command of the "Great Eastern." I considered myself, previous to that appointment, a careful and industrious observer of azimuths, and had read all that had come to my notice affecting the compass. But in going to the fountain-head of this special science, in order to leave nothing undone that could be done, I am bound to say that neither I nor any of my colleagues, nor any officer of Her Majesty's Service that I have met since, knew more than the mere outline of the science of magnetism, as affecting ships and compasses, compared with Captain Evans and his staff. All maritime nations reproduce every word he writes on the subject; and not to adopt the supervision of this department, either directly over the compasses, or at least over all compass adjusters, is a direct omission to avail ourselves of a power not yet equally possessed by any other nation that I am aware of, and is a distinct injustice to the officers of the mercantile marine.'

I now proceed to consider the best mode of conducting the proposed system of examination.

If it should be thought impracticable to entrust the proposed duty to a department of the Admiralty, I would suggest that the Astronomer Royal, Captain Evans, the President of the Royal Society, an eminent representative of the shipowners, a representative of the insurance interests, and a practical nautical instrument maker of repute, would constitute a council which, under the authority of the Board of Trade, could readily consider the subjects in which candidates should be examined. Examiners could be appointed to act under the direction of the local Marine Boards, and conduct the examinations in the same manner in which the examination of masters and mates is now conducted in the principal ports.

Proposed Council under the Board of Trade

Views of Mr. Archibald Smith

'It should be borne in mind,' observes Mr. Archibald Smith, 'that the recommendations of the Royal Society centred in and hinged upon the assumption that there should be on the staff of the Board of Trade an officer thoroughly instructed in the subject, the whole or the greater part of whose time should be devoted to it, and with sufficient assistance. Without this I am satisfied that little, if anything, of value can be accomplished by the department; with this, much, I have no doubt, may be done in each of the three branches into which the subject has been divided, viz. :—

'1. The correction of compasses in particular ships.
'2. The advancement of the science in the deviation of the compass.
'3. The education of masters and mates, and that even without compulsory legislation. Indeed, the verdict in the case of the "Carnatic" will probably do more than compulsion to draw the attention of shipowners to this subject.'

Mr. Rundell, from whom I have so often quoted, expresses the belief that when adjusters shall have passed an examination, and have been certified by the Board as competent, it would be reasonable to require that they should be called upon to make a formal declaration that their work had been done in the best manner. 'This,' he says, 'would tend to make an adjuster of compasses more particular, from the fear of the effect which any accident to a ship, which could be traceable to the compasses, might have upon his personal reputation as the holder of a certificate from the Board. It would also give him a more independent standing with shipowners.'

Opinion of Mr. Rundell

One merit which belongs to the proposals now made is, that while it would afford to all interested parties reasonable security that all iron ships, holding a character from Lloyd's and the Liverpool registries, would be sufficiently and satisfactorily equipped as regards compasses, it would avoid any necessity for Government supervision, or, as it would probably be termed by the mercantile community, 'Government interference.' To some, indeed, it may appear unnecessary that the Board of Trade should interfere in this matter; but, as Sir Frederick Arrow observes, though to the intelligent and scientifically disposed officer the state of the law may be comparatively unimportant, in this, as in all other matters, we should legislate for the stupid.

Government supervision avoided

Having now stated my case, I am anxious to obtain from the Institution of Naval Architects an expression of their opinion. Public opinion on this subject is unscientific, and therefore of little value; but the opinion of this Institution, being the opinion of a body of scientific men, would, I believe, be regarded as authoritative.

I can only say in conclusion that, in my humble

Necessity of Board of Trade certificates for adjusters of compasses

judgment, it is quite as necessary to secure a guarantee of the competency of the adjuster of a ship's compasses as it is to require the possession of a certificate of the knowledge of seamanship and navigation in the officers responsible for the duties of navigation. The interference of the Board of Trade is too much resented by interested parties. The commercial instinct is no doubt a reliable guarantee where pecuniary interests are alone concerned; but when we have to deal with the much graver question of human life, we reasonably require—whether in medicine, in mining, or in the navigation of the seas—that those who are responsible for the lives of others shall be able to prove that they are qualified for their important duties. This principle should be extended to the adjustment of compasses, the most important instrument of navigation on board a ship.

II

THE CHANNEL LIGHTS

SPEECH IN THE HOUSE OF COMMONS, MAY 1873

Object of motion only to get fog signals placed on coast

IN seconding the motion of my honourable friend, I shall proceed on the assumption that his principal object is to attract the attention of the House to the important matter which he has so ably handled in his speech, and that he has no intention of pressing his motion to a division if he receives satisfactory assurances from the Board of Trade. All that we ask is that there shall be no unnecessary delay in carrying out the recommendations of the Trinity Brethren in favour of placing fog signals of the most powerful description on points of the coast which are at present most imperfectly guarded. I am confident that the President of the Board of Trade, and his able advisers on nautical subjects, must welcome the motion as a justification to themselves for adopting the suggestions of the Trinity House.

Efficiency of the Trinity House lighthouses, lightships, and buoys

It is not my intention, in supporting this motion, to criticise the Trinity House. On the contrary, I am convinced that the administration of its important and extensive business leaves little to be desired. Our lights are quite as powerful as the French lights. They are superior to those of every other nation. The outlay of the foreign Governments in the construction of lighthouses has been greater than the outlay in England.

The lightships, which have been placed in numerous exposed situations on the coast, have maintained their positions in the most tempestuous weather, and have very rarely been driven off their stations. Again, the coasts of the United Kingdom are, according to the report of the Royal Commission of 1861, better supplied with buoys than any foreign coasts, and these buoys are maintained in admirable order. In short, the Trinity system would appear to be as nearly perfect as possible, and worthy of the greatest maritime nation in the world in every respect, except in that which forms the subject of the present motion.

Superiority of American system of fog signals

In the matter of fog signals, the coasts of the Canadian Dominion and the United States are infinitely better guarded than our own. The superiority of the American system of fog signals over our own is due to the extraordinary difficulties with which those who navigate in American waters have to contend. While the days on which fog prevails on our coast do not exceed sixty or seventy in the year, the American coasts are enveloped in fog for one-half of the year or more. The result is that, since the organisation of the Lighthouse Board in 1852, there have been established on the coasts of the United States thirty-three powerful whistles or trumpets, which are sounded by machinery during fog. But if we have fortunately less fog than the American mariners, it does not follow that it is not worth while to provide the best description of fog signals, in order to secure the greatest possible safety for those who navigate in British waters. The Royal Commission to which I have referred recommended the more frequent adoption of guns, or whatever other means might be found more efficient, for indicating the locality of lighthouses during fog; and, referring to the gongs which are provided in all the light-

Recommendations of the Royal Commission

ships of the Trinity House and the Ballast Board in Ireland, they said they were satisfied that they were not sufficiently powerful, and recommended the provision of a more efficient warning in fog as a subject of investigation. The uselessness of bells has been pointed out by Mr. Beazely, in a lecture recently delivered before the United Service Institution, in which he says that a bell weighing 2¼ tons has been heard only one mile to windward against a light breeze. If then, he says, a bell of that size is effective in a light breeze to a range of only one mile, what, under similar circumstances, may be expected to be the range of the comparatively light bells of from 3 cwt. to 7 cwt. employed as fog signals in our rock lighthouses and lightships? Meanwhile, the fog signals in use on the American coast have been carried to a very high degree of perfection. The Trinity Brethren say that all the horns and whistles they heard on the American coast may be safely relied upon, when care and attention are used, to a range of from two to eight miles. Sometimes the sound will penetrate to much greater distances.

Inefficiency of bells

I am informed by my constituents, the fishermen of Hastings, that the steam fog horn at Dungeness can be heard at a distance of fourteen miles with a light breeze off the land. As fog signals, guns are equal to the apparatus in use in America; but the original cost of their establishment is not less than 1,000*l.*, as compared with an expenditure of from 600*l.* to 1,400*l.* for the horns and whistles worked by machinery; while the working expenses are considerably greater. Whatever the precise amount may be, certain it is that the cost of establishing the improved signals would be an utterly insignificant item compared with the importance of rendering the navigation around our coasts as secure as, in the nature

Greater cost of gun signals

of things, it can possibly be made. To establish a light-vessel, at an original cost, on the average, of 5,000*l.*, manned with a numerous crew, and involving for maintenance an annual expenditure of 1,200*l.*, and then to hesitate to sanction an additional outlay of 600*l.* for providing the light-vessel with an effective fog signal, is an absurdity so glaring that I am confident that this House will not hesitate to sanction the policy of providing the most perfect apparatus to every lighthouse and lightship on our coasts.

Small additional cost of a fog signal to a lighthouse

I observe that the recommendations of Sir Frederick Arrow are limited to a few points on the coast. I apprehend that he and his colleagues have refrained from making more extensive proposals lest some opposition should be raised on the part of the Board of Trade on financial grounds. Foreign Governments do not hesitate to incur a large expenditure for such objects when their necessity has been proved. Until 1825 the French lights were few in number. After that date a grand and comprehensive plan was undertaken of erecting a large number of additional lighthouses in what were considered the best positions, and the whole system was remodelled.

Lighthouse system on French coast

Allusion has been made to the large number of fog signals recently established on the coasts of the United States. From time to time there is reason to apprehend that the Board of Trade, the guardian of the public purse, has not been bold enough. The Royal Commissioners of 1861 say :—'The Board of Trade has steadily kept economy, rather than progress, in view ; but the saving they have thus effected has been represented as sometimes a false economy, and it has unquestionably led to much unsatisfactory correspondence, and, in some instances, to prejudicial delay.' The recent correspondence relative to Turnberry Head is a case in point. My right hon.

False economy of Board of Trade

friend, now at the head of the Board of Trade, has shown his zeal for the welfare of our mariners in many ways, and I trust that he will not adopt a course which would expose him to the criticism applied by the Royal Commission to his predecessors in office.

Public revenue should bear expense of lighthouses

In conclusion, I may mention that the Royal Commission, though it was not within their instructions to make a distinct recommendation on the incidence of the light dues, referred with marked approval to the reports of four Special Committees, who had been authorised to deal directly with that important question, and who had recommended that the expense of erecting and maintaining our lighthouses should be defrayed out of the public revenue. That is the system which prevails in America, and I feel confident that its adoption in this country would be for the public advantage.

III

ADDITIONAL LIGHTHOUSES

SPEECH IN THE HOUSE OF COMMONS, MARCH 4, 1880

MR. T. **BRASSEY** rose to call attention to the necessity for additional lighthouses on the island of Galita, in the Red Sea, and the Gulf of Aden. After showing that a great and rapidly-increasing proportion of our trade to the East was carried by the route of the Suez Canal, and mentioning that in 1878 no less than 1,217 British vessels passed through the Canal, he said it was needless to say more in order to show how deeply interested we were in everything which could add to the safety of navigation on this main route from Europe to the East. Of the various aids to the navigator, lighthouses were the most important, not only as a means of saving life and property, but as a means of shortening the passage. With the growth of commerce, the number of lighthouses on our own shores had been rapidly increased. We had now one light for every 10½ miles of coast. The illumination of the French coasts was equally perfect. While, however, the coasts of the great maritime Powers were now efficiently lighted, lighthouses had been seriously neglected in the hands of Governments with exhausted treasuries; and the coasts of barbarous or half-civilised countries, in the absence of concerted action on the part of the maritime Powers, must remain

Importance of lighthouses

Insufficient lighting on the Spanish coast

in total darkness. Hitherto, with one notable and praiseworthy exception, no attempt had been made to organise such concerted action. Cape Finisterre was the first point on the route to the East to which he desired to call attention. It was one of the most important land-falls in the world. A first-class light was exhibited from Finisterre ; but the positicn was badly chosen, and the light itself was not in good order. He was within range of Cape Finisterre for several hours during the night of the 27th of January, and on that occasion the light did not revolve. Another first-class light was urgently required on Cape Villano, 25 miles north-east of Finisterre. The range of the existing light was only eight miles. In consequence of the insufficient lighting of this coast, vessels were compelled to steer many miles further to the westward than would be necessary if a powerful light were exhibited on Villano.

Coast of Tunis

Want of a light on Island of Galita

Continuing eastwards and entering the Mediterranean, the southern shores of Spain, and the long range of the north coast of Africa in the hands of the French Government, were well protected with lights. But when we reached the coast of Tunis the lighthouses were too few in number. The island of Galita, which was under the jurisdiction of the Bey of Tunis, was one of the most important pivot points on the voyage to the East. Ships navigating the Mediterranean made a straight run of 690 miles from Gibraltar, until they arrived off the north end of Galita, when they altered their course two points and steered for the Malta Channel. In the night, or in the thick weather prevailing near Galita in the winter, the prudent navigator would pass the island at a distance of from 10 to 15 miles. With a first-class light a margin of five miles would be ample. If the passage to the south of the island were taken, which would be perfectly practicable in clear weather, the saving of distance would be still more considerable. The necessity that existed for such a light on Galita had been repeatedly urged by the Committee of Lloyd's. On this point Captain Angove, the commander of the Peninsular and Oriental steamer 'Poonah,' had written as follows :—

'The absence of a light on the island of Galita has often caused me great anxiety. In the winter months the weather is frequently dirty in that vicinity, and the currents are strong.'

The Red Sea

Danger of 'The Brothers' rocks

Lights wanted on Aboo-Ail and off Mocha

Passing onwards on the voyage to the East the navigator was assisted by an adequate number of lights until he emerged from the Gulf of Suez into the Red Sea. At a distance of 95 miles north of the light on the Dædalus shoal, which was the southernmost light at present shown in this part of the Red Sea, the track of steamers ran close to two rocks called 'The Brothers,' only 20 feet above water. They were invisible at night, and the current in that part of the Red Sea was strong and uncertain. A few years ago the Dutch steamer 'Prinz Hendrik,' carrying troops to Batavia, was totally wrecked on these rocks. A light of the second or third order, visible at a distance of, say, ten miles, was very necessary at this point. Proceeding down the Red Sea for a distance of 720 miles no lights were absolutely required until a point within one hundred miles of the island of Perim. At its southern end the shores of the Red Sea were fringed with reefs, which ran out seawards for some distance on each side of the channel, and here the experienced commanders in the Peninsular and Oriental service urgently asked for two additional lights—a light with a range of 20 miles on the islet of Aboo-Ail, off the north end of the island of Jebel-Zuker, and a light on the bank off Mocha. The Peninsular and Oriental steamer 'Alma' was wrecked on Jebel-Zuker, and the steamer 'Penguin' was quite recently lost on the same spot. The value of lighthouses as a means of saving time might be illustrated by a statement lately made to him by Captain White, a commander in the Peninsular and Oriental service. On a recent occasion, arriving off Aboo-Ail in the evening, he was obliged to close the Arabian shore, and to navigate the vessel by the lead, until he arrived off the island of Perim, a distance of 90 miles. With a light on Aboo-Ail he might have run boldly on and have made the passage in eight hours. Not having the assistance of the light, the time actually occupied was eighteen hours.

Large amount of traffic in Red Sea

The detention in these intricate spots in the case of vessels commanded by masters not intimately acquainted with the Red Sea must necessarily be more serious. Captain Symons, in an interesting letter on this subject, very justly said that the Red Sea was now the highway of the world for Eastern traffic. On his last homeward voyage he had passed nine large steamers in one watch of four hours. Ten years ago an equal number would not have been seen in a month. Considering the value of the property, mostly carried in English ships, that now passed through the Red Sea, it was imperatively necessary that the coasts should be properly lighted. The mail steamers, especially, were called upon to maintain a high rate of speed, were timed to arrive to the hour, and were liable to heavy penalties if late. They certainly ought to have the benefit of any modern invention for facilitating navigation on a dangerous coast.

Cape Guardafui. Wrecks off the Cape

Continuing an imaginary voyage to the East, the next important point on which a lighthouse was required was Cape Guardafui. Here twelve large steamers had gone ashore within the last six years. The list included the 'Meikong,' of the French Messageries service, and the 'Garonne,' a steamer of the Orient line recently established between London and Australia. Ten of these ships were totally wrecked. Among the shipowners interested in the trade to the East who had strongly recommended the establishment of a light on Cape Guardafui, he might more particularly refer to the General Shipowners' Association, and the owners of the Glen, the Castle, and the Ducal lines. The directors of the British Indian Company, while expressing a strong opinion as to the desirability of establishing a light on Cape Guardafui, recommended that it should be erected by the British Government, under international arrangement, and not by the Egyptian Government. It might be necessary to explain that the Egyptian Government had contemplated the erection of two lighthouses—the one on Ras-Hafoon, the other on Guardafui, in compliance with suggestions from the British Government. The objections of the British Indian Company were fully shared by Captain Roberts, the superintendent of the Peninsular and Oriental Company at Suez. The expenditure for the two lights, as estimated by the Egyptian Government, was £48,000, and they proposed to levy an additional tax upon passing ships of 2*d*. per ton. Efficient lighthouses could be erected at a much more moderate cost. He was unwilling to trouble the House with nautical details, and would not, therefore, enter into the various considerations which had been urged by those who doubted the utility of a light on Guardafui during the period when the south-west monsoon was at its height. Opinions were unanimous as to the value of the light through at least eight months of the year. A light on Ras-Hafoon, ninety miles south of Guardafui, would be valuable at all seasons to ships engaged in the

A lighthouse wanted

Should be erected by British Government and placed under international control important trade with the Mauritius and the east coast of Africa.

Lights required on islands of Socotra and Minicoy

He had only to mention two other points on the route to the East on which lights were required. One was the east end of the island of Socotra, which was passed by all vessels bound to and from Bombay, and in the south-west monsoon also by vessels navigating to and from Galle. The other point to which he referred was Minicoy, a small island of the Laccadive group, upon which some years ago the Peninsular and Oriental steamer 'Colombo' was totally lost, and which must be passed by every vessel bound from the Red Sea to Ceylon, the Bay of Bengal, the Eastern Archipelago, China, and Japan. All the lights which he had enumerated would, if established, be of the greatest advantage to navigation. At Cape Guardafui it might be necessary to erect a fort and to provide a small garrison for the protection of the light. In the other cases nothing more than an ordinary lighthouse was required. None of these lights, however, could be erected except under international agreement, and in bringing the subject under the notice of the House his desire was to urge the Government, without delay, to secure the concerted action of the maritime Powers. Sir Travers Twiss, in a paper read at the Guildhall in August last, had suggested that the convention signed at Tangier between the Sultan of Morocco and the representatives of the European Powers furnished a precedent that might be conveniently followed. Under the terms of this convention the Sultan of Morocco had erected a lighthouse on Cape Spartel and made over the entire administration to the contracting Powers, each o whom contributed £60 a year towards the maintenanc of the light. The light on Cape Spartel afforded the greatest assistance in the navigation of the Straits of

Concerted action of maritime Powers desirable

How the light on Cape Spartel is maintained

Gibraltar ; and it belonged to England, as having by far the deepest interest in the trade with the East, to take the initiative in negotiating similar arrangements with reference to the additional lights required on the voyage from Europe to the East.

International lighthouses in the East

The House would doubtless share the hope expressed by Sir Travers Twiss, that hereafter international lighthouses would be among the trophies of peace which the civilisation of Europe would set up in the islands of the far East. The aggregate expenditure on the lighthouses would be small, it would be readily shared by other nations, and it was absolutely trifling in comparison with the loss of perhaps a quarter of a million in a single steamer. When the lighthouses which he had enumerated were completed, premiums of insurance would be reduced, voyages would be accelerated, the dangers to life would be diminished, and the anxieties of harassed commanders would be relieved.

IV

HARBOUR WORKS, LIGHTS, SHIPPING, ETC.

ADDRESS AS PRESIDENT OF THE SECOND INTERNATIONAL MARITIME CONGRESS, JULY 18, 1893

As the son of a contractor for public works whose experience extended to almost every country in Europe and every quarter of the globe, it is an acceptable duty to offer a cordial welcome here in London to the members of this Maritime Congress. To our foreign colleagues, especially, I desire to give an assurance that their presence among us is highly appreciated.

Advantage of such meetings

It is hardly necessary to justify the holding of the present conference. The occasional meetings of the members of a profession, to exchange experiences and discuss unsolved problems, must always be for the mutual advantage of all concerned.

Not addressing you as an engineer, I shall not be justified in detaining you at any length. I am not competent to enter in detail into professional questions. I may, however, refer to the part which this country has taken in the execution of works for the safety and convenience of maritime trade.

As a nation we have been forced by geographical conditions to take the lead in shipping enterprise. But while nature has compelled us to be seamen, she has not made that calling less hazardous for ourselves than for the mariners of other nations. Without the aid of the engineer we should have been possessed of few ports accessible for vessels of size ; and nowhere have the aids to navigation by lighting and buoyage been more valuable than on our mist-bound and tempestuous shores.

What the engineer has done for seamen

I may briefly, under two heads, review what has been done ; and first I will deal with breakwaters.

No expenditure of public money has been more beneficial than that which has been applied to the construction of the splendid works which I will mention. We began in 1812 with Plymouth. This noble breakwater gives shelter to the whole area of Plymouth Bay from the billows of the broad Atlantic. In 1842 three breakwaters of a similar character were commenced, at Portland, Holyhead, and Dover. Under Portland breakwater the sheltered area is 2,130 acres. For naval purposes the work has proved of the greatest advantage. Holyhead breakwater was completed in 1873. The sheltered roadstead is too limited in extent. The protection afforded has, however, been of the utmost service in facilitating the intercourse between England and Ireland. The existing pier at Dover was completed at the same date as that at Holyhead. The works were attended with considerable difficulty from the tides, the depth of water, and the want of materials on the spot. To give shelter to Dover as a roadstead, an eastern arm is needed. The western arm, which has alone been completed, has been a work of the greatest public utility. At Alderney a breakwater designed essentially for strategical objects has cost as much as the structure at Plymouth. From an engineering point of view it is an admitted failure, owing to the destructive action of seas and tides. The area of sheltered water, limited as it is, might be of great value to a torpedo flotilla.

Breakwaters. Plymouth

Portland

Holyhead

Dover

Alderney

Peterhead

Turning northwards, mention should be made of Peterhead. That important centre for the fisherman is to be protected by a breakwater, now in course of execution by convict labour. In Ireland we have a fine artificial harbour at Kingstown, protected by two converging breakwaters. The sheltered area is 250 acres.

Kingstown

The harbours of our busy north-east coast, as formed by nature, were shallow rivers with no protection at the mouth from the easterly gales which sometimes sweep across the North Sea with great violence. The local harbour authorities at Tynemouth and in the Tees have succeeded in effecting great improvements at an unprecedentedly low cost, using as the material for construction the refuse slag from ironworks.

Tynemouth

The labours of our engineers in the construction of breakwaters have naturally been extended to the colonies. Four works merit special mention. At the moderate cost of 110,000*l.* Kurrachee has been made an admirable harbour and the principal outlet for the Scinde Valley and the trade of the Punjaub. Strategically the position is of the highest importance.

Colonies. Kurrachee

Madras and Colombo

The valuable commerce of Madras and Colombo was formerly carried on in roadsteads completely exposed to the fiery winds of the south-west monsoon, and occasionally to cyclones. They are now well protected. At Madras, two converging arms, each of some 3,900 feet in length, have been formed. Colombo is protected by a single breakwater, which gives shelter to 502 acres of water space.

Table Bay, extent and cost of breakwater

The breakwater at Table Bay is perhaps even more valuable than either of the works already mentioned. Before its construction the bay was completely exposed to gales from the north, which sometimes blew with irresistible fury and were invariably fatal to sailing ships overtaken at anchor. These dangers have been completely overcome by the formation of a breakwater 3,700 feet in length. The cost of this noble work, with an inner harbour and graving-dock, has exceeded 2,000,000*l.*

Dredging mouths of Tyne and Tees

The Clyde

I now turn to works of another class, namely, those undertaken for the improvement of the entrances to ports. Allusion has already been made to the breakwaters at the mouths of the Tyne and the Tees. In the former river dredging operations have been carried out on a vast scale. No less than 60,000,000 cubic yards have been excavated. A channel, with a minimum depth of 20 feet at low water, has now been formed right up to Newcastle. Before 1860 steamers drawing 3 to 4 feet used to ground for hours. In 1852 the depth of the Tees up to Middlesbrough was 3½ feet at low water. The channel is now being deepened to 20 feet. Improvements not less remarkable have been carried out in the Clyde. In the middle of the last century the river was fordable twelve miles below Glasgow. To-day 24 feet at high water and 15 feet at low water are carried right up to the quay walls of Glasgow.

Ireland

Belfast

The Mersey. Deepening the bar

Crossing to Ireland, in the early part of this century the channel of the river Logan only allowed vessels of 10 feet draught to reach Belfast. By dredging operations, and the construction of walls and straight cuts, a depth of 20 feet is now carried at high water. It is proposed to increase it to 24 feet. I have now to refer to a most important work not yet completed. At the mouth of the Mersey, which will, I hope, be visited by many members of this Congress, operations are in progress on a large scale. The powerful dredgers employed were constructed at Barrow from the designs of Mr. Blechyngden. The deepening of the bar of the Mersey is a work of urgent necessity. At low water the available depth is 10 feet, and steamers which have crossed the Atlantic at speeds only obtainable by enormous expenditure, both on building and on working, are occasionally detained outside for hours.

I cannot conclude these remarks without expressing the acknowledgments of those concerned in organising this Congress for the courteous invitations which have been received from the harbour authorities at all our principal ports, where works of interest to the engineer are to be seen.

Lighting and buoying of coasts

The lighting of the coasts and the buoyage of navigable channels will properly receive considerable attention in the section which deals with those subjects. An immense advance has been made in recent years, both in extending the range of lights, and in giving them a distinctive character. While France and England have been leaders in the work of improvement, I do not know where to look for more perfect lighting than we find in the Gulf of Finland. In the United States, frequent fogs have given a stimulus to the inventive genius of the nation in perfecting steam whistles, sirens, and bells, and other danger-indicating appliances.

International system of buoyage

The desirability of an international agreement in relation to buoyage cannot be too strongly insisted upon. To the mariner it would be a real boon if all channels were marked by buoys upon a uniform system, both as to colour and shape.

In the sections dealing with shipping we are likely to hear more about steamers than sailing ships. The day is, however, probably far distant when the use of sails will have become altogether a thing of the past.

Advantage of sailing ships for long voyages

For long ocean voyages, sailing vessels are capable of doing efficient work, even in competition with steamers.

They carry goods of the same class for which the canal can compete with the railway. The ships of recent construction have never been surpassed for symmetry, carrying-power, speed, and economy. I desire to raise the question whether in many cases economy has not been carried too far. Among the very finest of the modern sailing-ships numerous losses have lately occurred. There is some reason to fear that undermanning has been a frequent cause of disaster. When we find that complements, including officers, are considerably below one man for every hundred tons of cargo, it is evident that there is no available force for dealing with a sudden squall or shift of wind. May it not be the case that our shipowners sometimes spend too much on insurance, and too little on the manning of their ships? To frame a scale of manning is as desirable as it is difficult.

Under-manning

In conclusion, when all that the skill and energy of man can accomplish has been done, the sea must remain an element on which there are many dangers to be found. That so much has been done to mitigate its perils is largely due to the profession whose members I once more warmly welcome to-day. If, in the course of our deliberations, some further progress may be made in the same beneficent cause, all will agree that this Congress will not have been called together in vain. I hope—nay, feel assured—it will be a successful Congress. If successful, the chief credit will be due to our able Chairman of Committee, Mr. Vernon Harcourt, and a colleague whom all who know him love, our old friend, Mr. Forrest.

Engineers have reduced dangers of the sea

For the privilege of meeting in this hall we are greatly indebted to the Institution of Civil Engineers. Their President, Mr. Giles, has been ever ready to help us with his valuable counsel and co-operation.

V

THE LOSS OF THE 'VICTORIA' AND THE NEW PROGRAMME OF SHIPBUILDING

LETTERS TO THE 'TIMES,' JULY 7 AND DECEMBER 29, 1893 [1]

THE loss of the 'Victoria' raises many questions. The personal responsibilities of those concerned will form the subject of a judicial inquiry. On technical and administrative points it is possible to pronounce judgment without waiting for further information.

Disadvantage of very large ships

The stranding of the 'Howe' and the foundering of the 'Victoria' must confirm the doubts of those who have accepted with hesitation the steady advance in dimensions of our recent warships. When a disaster such as we have recently experienced occurs, the same lesson is always brought home to us. In its number of June 8, 1878, the 'Army and Navy Journal,' of New York, commenting on the loss of the 'Grosser Kurfürst' in the English Channel the previous week, observed :—

The 'Army and Navy Journal' on the 'Grosser Kurfürst' disaster

'Henceforth, instead of trying to build enormous, unwieldy craft, whose only merit is thickness of armour, greater attention must be paid to speed and mobility. If, with all efforts to avoid an impending collision, the result of ramming this great ironclad was instantaneous ruin, the same feat can be performed with equal ease intentionally in battle. Thickness of armour only provides against one of the dangers to which a warship is liable, and the one which is steadily decreasing in relative importance—namely, attack by guns. The ram must hereafter play an important part in naval warfare.'

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[1] These letters were not received in time to be included in vol. i. of 'Naval Papers,' to which they more properly belong.—ED.

In the construction of battleships of vast dimensions Italy has led the way. The policy pursued has not commanded unanimous approval. It has been condemned by Admiral Acton, a former Minister of Marine, and by Admiral Racchia, who now holds that office. Italy has at length abandoned the construction of monster ironclads. The new battleship, 'Admiral San Bon,' is of 9,800 tons displacement.

Present Italian policy

France

In France the Administration has, with reluctance, followed us in a great and rapid increase of dimensions. Naval officers and constructors and M. Weyl, the most active of contemporary writers on professional subjects, have been strong advocates for moderate displacements.

United States

In the United States the first three ships of the new programme ranged from 4,000 to 8,000 tons. The arguments for increasing numbers by insisting on some limits of dimensions and cost, as against the policy of building fewer ships of greater individual power, were admirably put together in a paper issued from the Naval Department at Washington in 1891 :—

View of Naval Department at Washington

'The process of reaching perfection is an experimental one, and is accompanied by many mistakes. The lack of important naval battles in recent years stands in marked contrast to the desperate efforts of European Powers to equip extraordinary vessels, designed to combine the invulnerable and the irresistible. To the rarity of great sea fights may be indirectly attributed the superabundance of types. A war between first-class naval Powers would doubtless demonstrate that the elaborate schemes of fleet tactics, which have been the theme of many essays by naval officers, have been chiefly valuable as a mental exercise ; and that, although much importance may attach to a skilful disposition of forces in the beginning of an engagement, yet, in view of the rapidity with which vessels would be disabled by the tremendous means of offence antagonised, and the inability to see or obey signals amid the confusion and obstructing smoke, it is evident that such an engagement must presently become a pell-mell scrimmage. Such a war, or one such battle, would prove what has long been the apprehension of intelligent officers, that the warship of our day has become far too complicated for the people who may be called upon to work her, and that a balance of advantage, unsuspected by many, rests with that vessel which has comparative simplicity.'

Dimensions of battleships building

Taking the armoured ships built and building for the leading naval Powers we find a large majority, especially in foreign countries, of less than 11,000 tons. Over 11,000 tons England has ten ships, France six, Italy three, Russia one, and the United States one—a total of 21. Under 11,000 tons England has two ships, France four, Germany nine, Russia eight, and the United States six—a total of 29.

While we have witnessed a steady growth of displacement in British ships built for the line-of-battle, the policy has been disapproved by many capable experts. In his paper, published in the 'Nineteenth Century' for May, 1889, Lord Armstrong wrote as follows :—

Lord Armstrong on the disadvantages of armoured vessels

'Although I am ready to commend the designs for the new first-class battleships, my distrust of the efficacy of all vessels of the armoured class in relation to their cost remains unchanged. All the advantage they possess in point of defence is a partial and imperfect protection gainst artillery fire. As regards rams and torpedoes, hey are as vulnerable as ships without armour at all, nd they are as liable to perish by the perils of the sea s any other kind of warship, while their cost is so great hat the loss of any one of them from any cause amounts o a national calamity. Mr. White, in his paper on hese designs, refers to what he calls the "too many eggs n one basket" argument; but he wisely adds that he eaves that argument to be dealt with by the Board of Admiralty, who are responsible on matters of policy.'

Torpedo boats dangerous to blockading fleet

The fatal power of the ram has been shown on many occasions. In circumstances favourable to the use of the weapon the torpedo is not less deadly. To go forth to meet the enemy and to blockade him in his own ports, o take at once the offensive, has been proclaimed the roper system of defence for the Power which claims to ommand the sea. The position of a fleet of ironclads ff a blockaded port full of torpedo boats on a dark night r in thick weather must be critical in the extreme. Admiral Hobart, who had practical experience in the Black Sea, and Admiral Aube were strong on this point. The destruction of the 'Blanco Encalada' is the most ecent illustration of the power of the torpedo. 'Never, erhaps,' says the 'Engineer,' 'was so signal a victory more cheaply gained. The torpedo is a weapon of immense possibilities.'

Increase of 74-gun ships in old wars

In considering what should be the displacement of ur modern ships the experience of the hard naval truggles of the past, though fought in wooden ships and under sail, will not be uninstructive. Admiral Colomb has given us a list of the ships in commission in 1796 and in 1813. In 1796 the ships in commission with 80 guns and over numbered 27, those of 74 guns 54. In 1813 we had in commission only 14 ships of over 80 guns, while those of 74 guns had increased in number to 85.

Big ships should have attendant satellites

In order to maintain fighting efficiency, while imposing a closer restriction upon dimensions, we must proceed upon the principle laid down by the late Sir Spencer Robinson. In his view 'no single ship alone could be adapted for naval warfare under the circumstances of the development of science and the means of destruction that now exist. Every ship must act in combination with other ships. She must be the unit round which other ships congregate. When we have got the ship and her satellites in attendance upon her of the right size, sort, and stamp, then we have got the one unit of force capable of doing its duty.'

Proportion of rams and torpedo vessels to each battleship

The 'Barfleur' and 'Centurion' may be accepted as the type for the line-of-battle. Around them should be grouped rams and torpedo vessels. 'I entirely disbelieve,' says Lord Armstrong, 'in the power of a battleship to prevent a surrounding force from closing upon her with ram and torpedo. The difficulty of hitting a rapidly advancing object, the range of which varies at every instant, is enormous, especially with heavy guns.' In the British Navy the 'Polyphemus' is the only ship specially designed for the use of the ram. Ships of this type should be multiplied. The armour should be stouter, the internal dispositions less complicated, the cost reduced. The policy here recommended cannot be carried out by halting measures. We must have at least two rams and two to four torpedo vessels for each line-of-battle ship.

It is with sincere reluctance that I trouble you at this juncture with any observations. Sorrow for the loss of Sir George Tryon and the brave men under his command is the feeling uppermost with all. I write because public attention has been drawn by the recent lamentable disaster to a difficult yet most important problem.

24 Park Lane, W., July 7.

Having undertaken a public duty requiring an absence of some months in India, it has not been possible for me to co-operate in pressing the popular demand for an increase of the Navy. While it is satisfactory to know that the necessity for a new programme of ship building has been accepted, the discussion cannot be considered as closed until a decision has been announced with reference to the amount of expenditure and the types of ships to be proposed by the Government.

A new ship programme necessary

Dealing first with expenditure, the standard laid down by the late Administration and approved by Parliament cannot safely be lowered. We must make such a provision as will insure that our rate of progress in shipbuilding shall be at least equal to the combined efforts of France and Russia. To keep pace with those Powers we cannot spend a less sum than has been recommended by Mr. Forwood and Lord Charles Beresford. This involves an outlay of not less than five to six millions a year for the next four or five years.

Should keep pace in building with France and Russia

In the new programme of shipbuilding it should be the first object to increase our strength in the line of battle. Lord Charles Beresford asks for eighteen ships, of which six might be of the ' Royal Sovereign ' type, of 14,000 tons, and twelve of the 'Centurion' type, of 10,600 tons. The preponderance of authority, British and foreign, is against the concentration of our whole expenditure on ships of the largest type. The most costly structures can neither be invulnerable in action nor secure against the many risks of the seas.

Number of battleships required

Cruisers

Turning to cruisers, it is satisfactory to know that we are well provided with vessels suitable for service as auxiliaries to line-of-battle ships. For the protection of the mercantile marine ten additional large cruisers of the 'Blake' type would not be too many. For the defence of our trade in distant seas our older ironclads would be effective if fitted with modern engines.

Use for small ironclads

I concur with Lord Charles Beresford as to the necessity for a new class of ironclad to form the inshore squadron. A fleet of heavy ships blockading an enemy's port must be protected from torpedo attack by swift armoured torpedo-catchers and rams. This point has been frequently urged in later numbers of the 'Naval Annual.'

Our position in the Mediterranean

A few words in conclusion on the position in the Mediterranean. A visit of a Russian squadron called public attention to the relative inferiority of the British fleet to the French, and still more to the French supplemented by their Russian allies. Any steps are to be deprecated which, while adding nothing to our effective strength in case of war, would certainly excite emulation in naval preparations. It should be our policy to make good any deficiency in the Mediterranean by an ample reinforcement of our Channel Squadron. The number of ironclads should be increased, and the ironclads should be accompanied by a due proportion of auxiliary cruisers.

Government House, Calcutta, December 29.

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